FOLIO OF COMPOSITIONS AND CRITICAL COMMENTARY

David Young

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FOLIO OF COMPOSITIONS

Thousands of Bundled Straw
1997–2005

I. clarinet in Bb & violoncello
II. bass recorder, oboe, trumpet, violin & percussion
III. soprano, oboe, violoncello & pianoforte
IV. cor anglais, bass clarinet in Bb, alto trombone, viola & contrabass
V. soprano & guitar
VI. soprano, oboe, clarinet in Bb, trumpet, tenor trombone, violin, viola, violoncello, contrabass & pianoforte
VII. soprano, bass recorder, oboe, clarinet in Bb, trumpet, tenor trombone, violin, viola, violoncello, contrabass, percussion & pianoforte

Skin Quartet
2003
for string quartet with digital film
[composed in collaboration with Louisa Bufardeci]

1. *Africa*
2. *South America*
3. *Australia / Oceania*
4. *North America*
5. *Antarctica*
6. *Asia*
7. *Europe*

Val Camonica Pieces
1997–2005

Stile I, II & III for guitar & violonello
Lexicon for three violonelli
Sarcophagus for string octet
Inventario for flute, oboe, clarinet in Bb, bass clarinet, tenor trombone, horn, 2 violins, 2 viola, 2 violoncelli, 2 contrabass & 2 percussion
Roccia for clarinet in Bb, violin, percussion & pianoforte
Animali for violin
Incisioni Rupestri for pianoforte

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I would like to especially acknowledge the work of artist Louisa Bufardeci with whom I collaborated closely on the creation and realisation of *Skin Quartet*.

My interest in the rock carvings of the Camonica Valley was sparked by the exhaustive archaeological studies of Emmanuel Anati, and his work remains for me an endless source of fascination and inspiration.

Thank you to the many musicians, friends and colleagues, as well as ensembles and organisations who generously contributed to the creation and performances of *Thousands of Bundled Straw*, the *Val Camonica Pieces* and *Skin Quartet*:

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Abstract

Thousands of Bundled Straw, the *Val Camonica Pieces* and *Skin Quartet* are three cycles of chamber music composed by David Young. These works comprise a folio of compositions accompanied by a critical commentary examining the context, inspiration and details of each work.

Composed over a period of almost ten years, *Thousands of Bundled Straw* is a song cycle for soprano and large ensemble. In many ways an autobiography of evolving composition approaches, the cycle's movements were each composed for different ensembles and circumstances. The movement have a close relationship to the performers who premiered the work, and the compositional process often involved technical and artistic collaboration with the musicians. Japan's culture, contemporary and past is an important catalyst for the song cycle. The macro- and micro-structure are shaped by influences as various as traditional Japanese packaging, the Japanese postal system, a biscuit packet and a temple tourist brochure. The *libretto* incorporates fragments from literary sources, such as Calvino's *Mr Palomar*, and Perec's *A Void*. These narratives and stories have influenced the conceptual shaping of the work.

Skin Quartet was composed in collaboration with visual artist Louisa Bufardeci. The conceptual starting point, aspects of the notational and visual material, as well as the performance context, all rely on this collaborative process across the artforms of music and visual art. Performed by a live string quartet reading their scores from laptop computer screens, the music is accompanied by a projection of a digital film which presents statistics on ethnicities and global populations with micro-landscapes of different skin types.

The ancient rock carvings of the Camonica Valley inspired the *Val Camonica Pieces*. The pieces, for various chamber combinations, employ the rock carvings in different ways: as musical gestures, points of inspiration and as literal transcriptions into music notation. The pieces can be played in any order, much

like wandering around the valley's many protected parks and significant archaeological sites.

Thousands of Bundled Straw, *Skin Quartet* and the *Val Camonica Pieces* are composed using rules and formulae. All three of the works draw from compendiums, catalogues and lists which are employed as foundations, bricks, mortar and detail in their construction. Taking inspiration from the OuLiPo group (Workshop for Potential Literature), of which Calvino and Perec were members, the purpose of these regulations and restrictions is to create clearly defined structures within which free inventiveness is possible.

Since completing this folio of compositions, many of the experiments, research and ideas explored in the works have been applied in new ways. Later works for chamber ensemble draw from the calm and transparency of the final movement in the song cycle. The use of computer screen-based photographic and animated notation has continued to evolve in subsequent projects. In particular, the practice of collaborating across artforms has influenced compositions created under the auspices of the arts organisation Aphids.

NANCY SPECTOR …it is helpful to think of the objects and actions that you put out into the world as narrative devices, as triggers for stories that might differ from viewer to viewer.

MAURIZIO CATTELAN Yes, this is more interesting, maybe. I like all the little stories behind the work. They make it more alive.[1]

Introduction
Image and Music

Despite working in an aural sphere, often a composer's only link to the world is visual. The musical score is a text which the composer hands over to the performer; a set of instructions, usually rendered as visual symbols within a predefined or inherited system. This paradox of musical composition is explored in the three works that are the subject of this commentary: the song cycle *Thousands of Bundled Straw*; *Skin Quartet*; and the *Val Camonica Pieces*.

Each of these works employs various approaches to notation, ranging from conventional notes on staves, to graphic, photographic and animated scores. These different approaches traverse a continuum between notation which is rigorously precise and exacting, through to more interpretive, freer notation. Ironically the

[1] Nancy Spector, 'In Conversation with Maurizio Cattelan', *Maurizio Cattelan*, London: Phaidon, 2000, p. 12–3

seemingly freer forms of notation are often as precise and even more nuanced than conventional notation. Whichever form of notation is being used, there always remains a slight gap of uncertainty between the composer and the interpreter. This gap is bridged by the musician's experience and training, the context of the composition and performance, and the myriad other factors that allow a visual cue from a page or computer screen to be realised musically.[2] Rather than this being a source of concern, this uncertain space can be a place of great spontaneity and energy.

> So often, in the way our society is structured, there is the feeling that if something can't be measured, it doesn't exist – there is still a reliance on mechanistic patterns in which 'reality' is only visible within a preordained system. I'm interested in the moments when the system falls down. What happens when our 'gods', that is, our inbuilt assumptions and personal myths, fail us? Uncertainty – neither 'yes' nor 'no' – is a difficult but incredibly creative state.[3]

Thousands of Bundled Straw, *Skin Quartet* and the *Val Camonica Pieces* is each comprised of seven movements. Furthermore many of these movements have seven sections, most obviously in Movement V of *Thousands of Bundled Straw*: seven songs for voice and guitar. This septangular preoccupation comes from external source material, as in *Skin Quartet* which mirrors the United States Central Intelligence Agency's division of the world into seven continents. It also derives from an intuitive, architectural sense of proportion and balance, and echoes mythological motifs such as the seven gates into the underworld in ancient Sumerian mythology, or the ancient Hindu conception of the seven chakras.

The division of each work into seven parts, therefore, has multiple motivations. It is a restriction and organising device for building time-based structures over long durations. Structuring devices such as these are also useful when working on compositions over a long period of time, as was the case with *Thousands of Bundled Straw* and the *Val Camonica Pieces*, both composed over a nine year period.

All of the works take their initial inspiration from visual material such as archaeological maps, microscopic photographs of skin and ancient rock carvings. The compositions include transcriptions of these visible source materials into conventional musical notation. There are also occasions when the visual stimuli appear directly as music notation, either superimposed on staves or timelines, or reproduced in their photographic entirety. While the result of the compositions is ultimately aural, these surfaces appear at varying degrees of visibility in the music. In the song cycle *Thousands of Bundled Straw*, the visual source material is entirely transcribed into conventional notation. Although there are many, primarily visual sources influencing the structure, shape and detail of the music, these sources remain invisible, hidden beneath the staves and conventional musical notation. In the *Val Camonica Pieces*, literal transcriptions of the rock carvings occasionally erupt on to the score amid the notes and rests. Small animals, spears and mounted figures take their places along treble clefs and

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[2] For a detailed discussion of unconventional approaches to notation and their consequences in performances, see Leigh Landy, *Experimental Music Notebooks*, Chur [Switzerland]: Harwood Academic, 1994, especially 'Notation/Form/interpretation/Performance', pp. 75–104

[3] Liza Lim, 'The endurance of uncertainty', ed. by Anders Beyer, Wing Wah Chan & Reinhard Oehlschlägel, *World New Music Magazine*, No. 14, 2004, p. 12

quavers; and at times, as with *Roccia*, there is no conventional notation at all, only the rock carving transcriptions on a time-space tablature. Similarly the visual inspiration for *Skin Quartet* is rendered as a musical score, alongside a projected digital film, in the form of images of different skin types overlaid with statistical data.

This shifting relationship between the aural result of the music, and the visual or conceptual material that is associated with the music, is an ongoing preoccupation in the three works being considered here. It is also the subject of many cross-artform collaborations which have been undertaken under the auspices of the arts organisation, Aphids. The connection between the installation/performance, *Ricefields*, and the second movement of *Thousands of Bundled Straw* is discussed later. However there is a strong connection between all three works and the ongoing research and inquiry for which Aphids has become a forum. The first Aphids event took place in 1994, involving a collaboration between the composer, a visual artist (Sarah Pirrie) and a fashion designer (Kath Banger). The resulting performance was part-concert, part-exhibition, part-fashion parade, incorporating installations, musicians, costume and food. Aphids has since gone on to initiate and present projects that usually involve contemporary music, but always with another artform. These projects are distinguished by their diversity, ranging from music and theatre, through to puppetry, martial arts and robotics.

For over a decade, Aphids has evolved into a forum to which individual artists from different spheres can bring their particular expertise, and utilise these in a cross-artform environment. Rather than collaboration meaning the blurring of boundaries with everyone trying a bit of everything, artists are encouraged to bring his or her specific, artisan-like qualities and techniques to the collaboration. In the case of *Ricefields* there were many opportunities for dialogue between composer and visual artist, sculptor and musician, lighting and sound designer. However each collaborator also brought their specific area of expertise and remained responsible for that area throughout the process.

This demarcation of responsibilities was very clear in the development of *Skin Quartet* which was also created under the auspices of Aphids. During the process of creating the digital film and the music, the visual and musical parameters were divided clearly between visual artist and composer. Although there was ample opportunity for discussion, exchange and sharing of ideas, in the final work the digital film was created solely by the visual artist, while the musical score was created by the composer.

In the creation of the three compositions discussed in this commentary, there is a strong connection and relationship with the musicians and artistic collaborators. The collaborative approach to composition allows completely new systems of notation and translation to develop, which gradually evolve through the course of individual pieces. *Inventario* in the *Val Camonica Pieces* undertakes a series of pedagogical shifts from conventional music notation through to entirely graphic, illustrative notation. Thus a sound world is introduced to the musicians first, and then gradually the notation allows them more interpretative freedom. Similar evolutions take place through the course of the larger cycles. Each movement of *Skin Quartet* takes a new approach to the notation, from video animation to conventional notation. The notational approaches in the folio of compositions traverse the continuum between ink-and-paper hard copy and the digital screen.

Japan has been an important influence on the composition of these works as well as their conceptual underpinnings. This influence takes many forms, and varies from direct quotations to abstract inspirations. Japan is a very ordered society and this sense of order and discipline permeates everything from the Japanese postal system to familial relationships. There are also many paradoxes to be found, which seem to confound the very structures on which much of Japanese culture is based. *Thousands of Bundled Straw* incorporates various apparent contradictions, as exemplified in the title of the song cycle which has a grammatical slip, typical of the mangled Japanese-English so often found in advertising and signage. In the myth on which much of the song cycle is based, there is an image of a stone statue of the Buddha floating on the sea. This is a conundrum that can exist within the internal logic of the myth, whilst creating a distinct slip of logic in the narrative. The composition of the song cycle takes inspiration from these slippages.

Inconsistencies, paradoxes and gaps provide much of the impulse for all three works. In the *Val Camonica Pieces*, the impossibility of ever knowing with certainty the meaning of the ancient rock carvings gives them an enduring allure. The archaeologist Emmanuel Anati has dedicated much of his life to the study of the valley's rock carvings, and has generated innumerable hypotheses and interpretations which, as plausible as many of them are, can never be verified.

In *Skin Quartet*, the impossibility of quantifying and statistically mapping the entire world and its population makes the CIA's *World Factbook* project more rather than less compelling. The Japanese concept of 'oku', or the hidden, refers to the notion of always remaining just out of sight, and ever elusive. The more seductively plausible the enigma, the more fascinating it remains—it is simple to imagine a stone statue floating on water, however impossible it may be in reality.

Several literary sources have had a role in the genesis of the compositions, and these have provided *libretti*, narratives and concepts which are employed in the music. Italo Calvino has inspired many composers. The underlying rigour and architecture of his collections of short stories lend themselves well to musical composition. Calvino's literary influence has many parallels with the musical influence of John Cage, not least because of the sense of irony and wit that they shared. Apart from the automatic writing experiments of the OuLiPo group, Calvino also employed chance in his work. Cage approached his *Music of Changes*[4] by consulting the *I Ching*. Calvino began writing *The Castle of Crossed Destinies*[5] by laying out tarot cards and constructing narratives and inter-relationships based on the random order in which they were dealt.

> I publish this book to be free of it: it has obsessed me for years. I began by trying to line up tarots at random, to see if I could read a story in them. 'The Waverer's Tale' emerged; I started writing it down; I looked for other combinations of the same cards; I realized the tarots were a machine for constructing stories; I thought of a book, and I imagined its frame: the mute narrators, the forest, the inn; I was tempted by the diabolical idea of conjuring up all the stories that could be contained in the tarot deck.[6]

[4] John Cage, *Music of Changes*, for solo piano, Books I–IV, New York: Peters, 1951
[5] Italo Calvino, *The Castle of Crossed Destinies*, trans. by William Weaver, London: Harcourt Brace, 1977, first published in Italian as *Il Castello dei Destini Incrociati*, Rome: Franco Maria Ricci, 1969
[6] *Ibid*., p. 126

Similarly, random elements are framed within structures: myths and maps in *Thousands of Bundled Straw*, ancient rock carvings in the *Val Camonica Pieces*, and statistical data in *Skin Quartet*.

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Thousands of Bundled Straw, *Skin Quartet* and the *Val Camonica Pieces* are driven by layers of stories, some of them literary, others apocryphal, others political. The stories that inspired and informed the composition of the works are not always immediately obvious, but rather they play across its surface, allowing the audience to weave their own stories and make their own connections. This elusiveness is intentional, in order to maintain momentum, and create an aural world that is endlessly open to interpretation.

Calvino offered his successors six memos, six qualities which he would have liked to see carried into this millennium. *Thousands of Bundled Straw*, *Skin Quartet* and the *Val Camonica Pieces* all share degrees of lightness, quickness, exactitude, multiplicity, visibility and consistency. Perhaps in composition, with all its trappings of authority, urtexts and historical legacy, lightness is the quality most desired, and yet most fleeting.

> There are numerous interpretations of lightness. There is physical lightness, the immateriality suggested by transparent materials such as glass; the lightness of a hollow shell; freedom from gravity; the lightness of being open to everyone; the abstract lightness of escape from the weight of reality; and the lightness that derives from the negation of the self.[7]

[7] Yuko Hasegawa, 'Polyphony', *Encounters in the 21st Century: Polyphony, Emerging Resonances*, Kanazawa: 21st Century Museum of Contemporary Art, 2005, p. 29

'…a would-be painter working with words…'[8]

Chapter 1
Thousands of Bundled Straw: Songs and Stories

Composed between 1997 and 2005, *Thousands of Bundled Straw* is a song cycle in seven movements for soprano, guitar, bass recorder, oboe/cor anglais, clarinet/bass clarinet, trumpet, alto/tenor trombone, violin, viola, violoncello, contrabass, percussion and pianoforte. Each movement requires a different instrumentation: the first and fifth movements are duos, the second and fourth movements are quintets, the sixth for nine instruments; the final movement being the only *tutti*. The total duration of the cycle is fifty-four minutes.

Thousands of Bundled Straw is a many layered work, composed over a considerable period of time. Consequently an exhaustive analysis is not possible within this context. Instead this chapter explores the song cycle from a number of different perspectives including its genesis and relationship to the performers; influences from Japanese culture, mythology and packaging design; literary inspirations,

[8] In his introduction [to Georges Perec, *A Gallery Portrait*, trans. by Ian Monk, intro. by David Bellos, London: Collins Harvill, 1996, first published in French as *Un Cabinet d'Amateur*, Paris: André Balland, 1979, p. 120] David Bellos recounts that this is 'the image that Perec liked to give of himself in his youth as well as in maturity'.

especially Italo Calvino and George Perec; and finally its relationship to cross-artform collaboration.

Catalysts for the Work and its Relationship to the Performers

The seven movements were commissioned by various ensembles and musicians, and the movements were premiered in different contexts. The relationship to the performers and the performance contexts all influenced the composition of the work, lending the cycle a certain personal and even autobiographical quality. Furthermore the movements were not composed in numerical order, but rather as the situations that led to the composition of each movement arose. Therefore, there is no linear progression from an early compositional style through to a later one. Instead there is an interweaving and enfolding of the compositional chronology within the movements themselves.

Movement I for clarinet and violoncello was composed for Carl Rosman (clarinet) and Rosanne Hunt (violoncello) during a residency with the Brisbane-based Elision Contemporary Music Ensemble. This Movement includes numerous moments of almost static white noise, achieved through various extended techniques which were devised in close consultation with the performers (for example, see Figure 1). These techniques, and the generally intricate and challenging nature of the musical language, reflect the abilities of the musicians which allowed a great freedom in the writing.

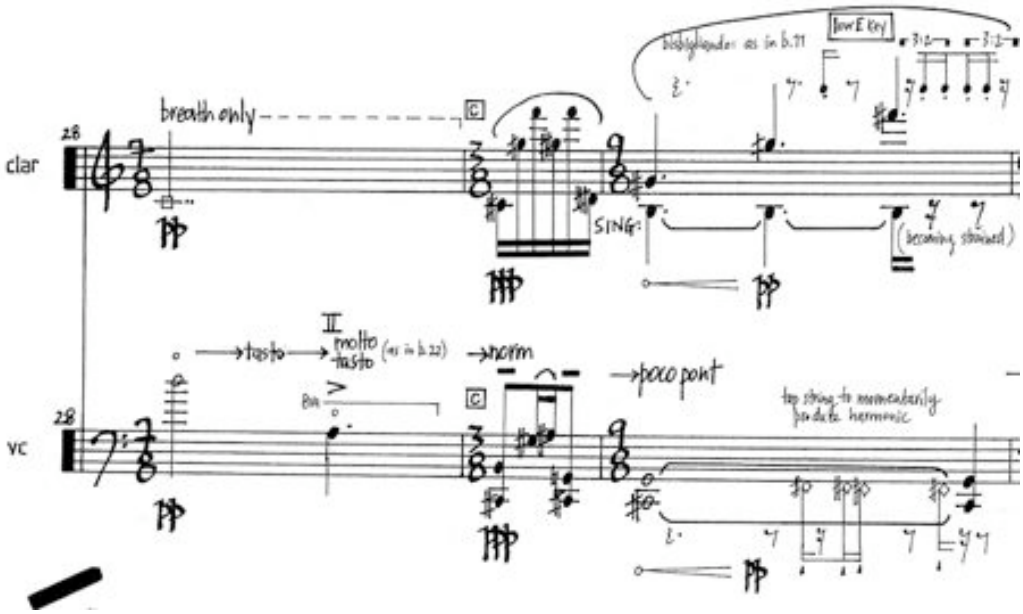

Figure 1. *Thousands of Bundled Straw*, Movement I, bb. 28–30.

The second Movement was commissioned for the 2nd International Recorder Festival in Amsterdam by recorder player Tosiya Suzuki. In many ways this Movement is a small bass recorder concerto, highlighting Suzuki's virtuosity. This Movement was also composed as a prelude to the installation/performance work, *Ricefields*, created in collaboration with visual artists Sarah Pirrie and Rosemary

Joy.[9] The dual motivation for composing this Movement is an example of the intersecting influences in the work which has multiple undercurrents from personal, musical, literary and mythological sources.
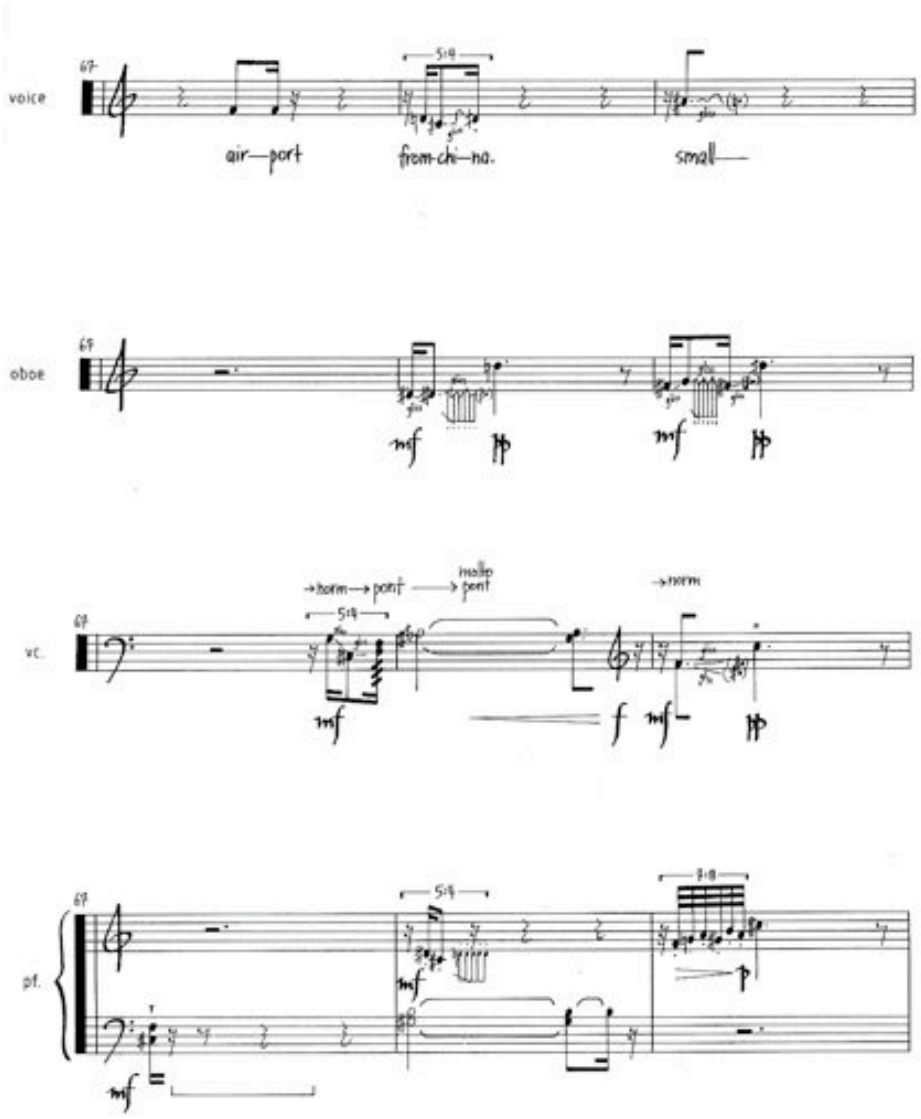
Figure 2. *Thousands of Bundled Straw*, Movement III, bb. 67–9.

The instrumentation for Movement III was proposed by Zurich's Æquatuor Ensemble (soprano, oboe, violoncello and pianoforte), an ensemble who always perform without conductor. In this case, the virtuosity of the musicians is

[9] *Ricefields*, an installation/performance collaboration between composer David Young and visual artists Sarah Pirrie and Rosemary Joy; with Natasha Anderson (recorder), Yasutaka Hemmi (violin), Peter Humble (percussion), Deborah Kayer (soprano), Michael Hewes (sound design) and Lisa Trewin (lighting design). First presented by Aphids at La Mama Theatre, Melbourne, 1998; subsequently presented at the *Centre Choreographique*, Belfort (France); Marine Gate, Matsue and Gallery 21, Tokyo (Japan); MetroArts, Brisbane and The Performance Space, Sydney (Australia), 1999. For background and analysis of the collaboration, see Cynthia Troup, 'Artists and Insects', ed. by John Davis, *Sounds Australian*, No. 52, 1998, pp. 28–30

exercised through the use of sharply and precisely interlocking gestures, at a swift tempo with widely ranging dynamics (see Figure 2). The Movement was first performed in Switzerland in 1998 and, as with all the *Thousands of Bundled Straw* movements, it is intended to stand alone as an independent work as well as form part of the larger structure of the song cycle.

Movements IV, V and VI of *Thousands of Bundled Straw* were commissioned and premiered by the Melbourne-based Libra Ensemble at the Royal Melbourne Institute of Technology's Storey Hall in 1998.[10] At that time, the Libra Ensemble had already been performing works by David Young for six years.[11] The concert, which also presented works by Japanese composers, was the culmination of a series of residencies in France, Italy and Japan. The location of these residencies accounts for many of the literary and cultural influences in the song cycle: Georges Perec in Paris, Italo Calvino in Rome, and the temples and mythologies of Japan.

Movement V for voice and guitar was composed especially with Deborah Kayser (soprano) and Geoffrey Morris (guitar) in mind. Kayser had already premiered works such as *Maxim* (soprano and baroque flute, 1991), *Alala* (solo soprano, 1993), *Ereshkigal* (music theatre for actors, soprano and counter-tenor, 1993) and *Ishtar* (soprano and violin, 1993). Through performing these works, there developed an understanding of compositional style from the singer's perspective, and the singer's range and capability from the composer's perspective. This exchange allowed the composer and singer to influence each other in subtle as well as pragmatic ways relating to *tessitura*, timbre, *libretto* and notation.

Morris had similarly worked closely with the composer, premiering the guitar solos *Jasmine* (1991) and *Ninsun* (1993), and the chamber works *Pale* (flute, clarinet, viola, guitar, 1992), *Scant* (ten-string guitar and violoncello, 1993) and *Ara* (bass flute and guitar, 1995). Through this range of collaborations, composer and performer developed a vocabulary of extended techniques, as well as the *scordatura* tuning which is employed in the *Thousands of Bundled Straw* songs and also in *Stile I, II & III* from the *Val Camonica Pieces*. The *scordatura* requires only minor adjustments to conventional guitar tuning, raising the second and fifth strings a quarter-tone (A natural to A quarter-tone sharp and B natural to B quarter-tone sharp, see Figure 3). However, this subtle shift creates many new possibilities for harmonic invention, and has the added advantage of enabling the guitarist to achieve precisely tuned quarter-tones without relying on bending the strings.
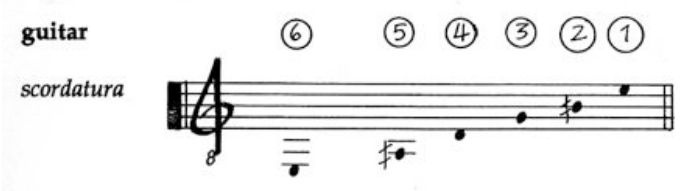
Figure 3. *Thousands of Bundled Straw*, Movement V, performance notes.

[10] *Plastic*, a concert presented by the Libra Ensemble, RMIT's Storey Hall, Melbourne, 26 February 1998; as well as the fourth, fifth and sixth Movements of *Thousands of Bundled Straw*, the program included works by Japanese composers Jo Kondo, Keiko Harada, Toru Takemitsu and Tatsuya Kawasoi.

[11] The Libra Ensemble's inaugural concert, *From One to Many*, took place at Melba Hall, University of Melbourne, on 31 May 1992; the program included the guitar solo, *Jasmine*, premiered by Geoffrey Morris, as well as works by Franco Donatoni, Hayden Reeder, Michael Whiticker, and Roberto Gerhard's *Libra* for six instruments, composed in 1968, from which the ensemble takes its name.

The guitar only appears in Movement V, and functions as a reduction of the ensemble orchestration which occurs at other times, most notably in Movements VI and VII. The musical material is heard on the guitar in miniature, with reduced instrumentation and dynamic but increased intricacy and detail.

Both Kayser and Morris were involved in the composition and performances of *Il Modello dei Modelli* (soprano, baroque flute and baroque guitar, 1992) and *Ninazu* (soprano and guitar, published in *Guitar Plus One*, Melbourne: Red House Editions, 1993; and subsequently released on the compact disc, Morris, Geoffrey, *bitterSweet*, Melbourne: Red House Editions, 2005). These works provided the opportunity to work with the musicians as a duo, and laid the foundation for the development of the songs in *Thousands of Bundled Straw*. At the time of the performance in 1998, only five of the seven songs were complete—Songs 3 and 6 were subsequently completed in 2001.

The song cycle was performed in its entirety for the first time by the Libra Ensemble in Melbourne, October 2005, and released on compact disc.[12] Despite the song cycle taking nine years to complete, sketches and plans were made in detail at the outset. The cycle offers a certain biographical mapping of compositional development over the years, whilst retaining a consistency of style, notation and above all conceptual intention throughout the work.

Japanese Packaging and Postage

The initial inspiration for the *Thousands of Bundled Straw* song cycle came from a most unexpected source, during an artist's residency in Hiroshima, Japan.[13] A packet of 'Bourbon Cookies', bought from a downtown supermarket, was enclosed in a cellophane wrapper around a cardboard box. Inside the cardboard box there was another cellophane wrapper in which there was a plastic tray. Sitting in the tray were individual biscuits each with their own individual plastic wrappers. The excesses of consumer packaging in Japan, especially during the nineties, are well known and documented.[14] The layers of superficial packaging seemed to be more important than the biscuit itself; the biscuits were actually quite small, and clearly mass-produced, but presented with this very elaborate framing. Many such systems and structures in Japan reveal themselves to have similarly enigmatic frames, with very particular systems of order that challenges conventional notions of linearity.

The Japanese postal system is another such system, at once ordered and arbitrary. Addresses in Japan required a prefecture (indicated by the Japanese suffix *–ken*); followed by the city's name (with the suffix *–shi*); followed by the locality within the city (with the suffix *–chome*); followed by the street name (usually *–ku*); and finally a series of numbers which indicate the exact block or apartment or house. However this numbering is not completely linear or ordered, as one would expect. Houses in each block or street are often numbered in the order that the buildings

[12] *Thousands of Bundled Straw*, a concert presented by Aphids and the Libra Ensemble as part of the Melbourne International Arts Festival, conductor Mark Knoop, Iwaki Auditorium, ABC Southbank Centre, Melbourne, 18 October 2005; David Young, *Thousands of Bundled Straw*, CD recording, Melbourne: Aphids/Libra, 2006

[13] Artist's residency in Japan from July to September 1997 as part of the City of Melbourne Mallesons Stephen Jacques Young Artists Award.

[14] For discussion on the Westernisation of traditional Japanese packaging see Yuriko Saito, 'Japanese Aesthetics of Packaging', *The Journal of Aesthetics and Arts Criticism*, Vol. 57, No. 2, 1999, pp. 257–265.

were built—a kind of historical numbering. Post-World War II, there were American attempts to reorganise the street numbers with very limited success. As a result, it is common to see people asking for directions in Japan. Often there is simply no other way of locating an exact address, despite the many signs and maps that line the streets. The linearity of the postal 'boxes within boxes' is ultimately undone by this discontinuous ordering, analogous to the 'Bourbon Cookies' packet. The structure and effort seems to have gone mostly into the outer layers, while the central point—indeed the point of it all—is left slightly elusive or even inconsequential.

The examples of packaging and postal system demonstrate an almost 'subversive linearity' at work[15]. The shift of frame across all of these different categories of source material entails a shift of scale. The shift is quite sudden, and on entering the new frame, or the shifted frame, the logic that follows is in some sense utterly discrete to the world within each new frame. There is a rational logic, but one that is not predicted by the first move. These discrete objects or parameters (*-ken*, *-shi*, etc.) fit neatly inside one another so that the contents of the preceding and succeeding frame, or container, are hidden but always tantalisingly present.

The sketches and planning phases of *Thousands of Bundled Straw* sought to invest the song cycle with an analogy of these 'boxes within boxes'. There is an external and intellectual structure as subversively linear as the layers of packaging around the biscuits.

How to Wrap Five Eggs

Another source of inspiration for the song cycle is the Japanese myth of Yoichi, a fisherman who finds a stone statue of the Buddha paradoxically floating on the sea. This statue is said to still be housed in the temple that Yoichi founded more than one thousand years ago. It is said to be kept in the innermost sanctum of the temple complex, 'packaged' in box within box and only publicly displayed once every one hundred years. As with a traditional stroll garden, 'both Buddhist temples and Shinto shrines are wrapped with a series of enclosures, consisting of walls, gates and vegetation, that regulate our experience of the respective space by offering a progressing sequence going from the outer to the inner. The glimpse of the inner gradually unfolds as we keep going through the walls and gates.'[16]

However, like the hidden statue of the Buddha, the innermost part remains inaccessible. In Japan this concept of innermost space which is suggested yet remains veiled is called *oku*.[17] Writing after attending the first performance of the entire song cycle, one reviewer's use of words like 'overhearing', 'just outside consciousness' and 'unfolding' are very consistent with this concept of *oku*.

> The overall effect of the music is of a minutely staged drama. One listens intently, as you might for the sounds of frogs, crickets, strange characters

[15] 'Subversive linearity' is most commonly associated with discourse on cinematography, for example see Ivone Margulies, 'Toward a Corporeal Cinema: Theatricality in the '70s', *Nothing Happens: Chantal Akerman's Hyperrealist Everyday*, Durham [North Carolina]: Duke University Press, 1996, pp. 42–64

[16] Saito, p. 260

[17] The concept of *oku* was popularised by architect Fumihiko Maki, *Japanese Translation of Communities*, Tokyo: Shokokusha, 1965

> and even spirits in an unfamiliar mountain village at night, while overhearing murmured conversation from another room. The work is dreamlike, floating just outside consciousness. Each motif seems to grow out of the previous one, like a perpetual unfolding. There can be sudden shifts in texture and meter and between instruments or blends of instruments, and abrupt pauses.[18]

Natural materials such as straw, bamboo and wood are central to traditional Japanese packaging (see Figure 4). The qualities inherent in natural materials 'are fully utilized in various Japanese package designs, ranging from a ceremonial envelope made with layers of paper tied with paper cord, to bamboo basket, to bamboo leaf wrapper for sushi and straw string woven to hang eggs. These designs are not only pragmatic and economical but also express the attitude of quiet respect and humility towards the material…'[19]

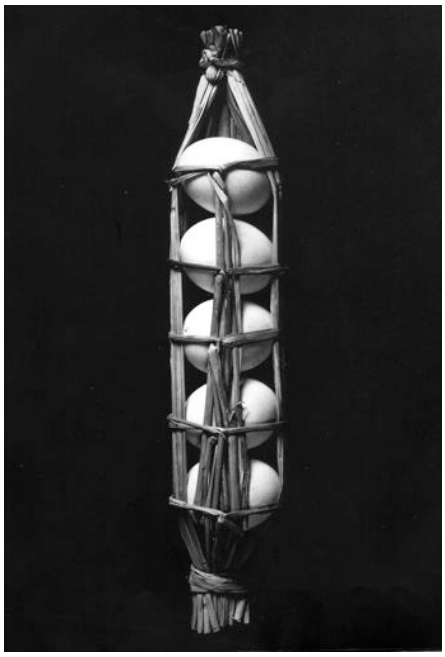

Figure 4. Egg carrier made of rice straw from Yamagata Prefecture, Japan, photo by Michikazu Sakai.[20]

> In this type of packaging the materials of nature are used in more or less original form, quite cleverly but without transmutation into such sophisticated shapes as those of boxes and jars. The package is so contrived that the contents are easily transported or preserved, but there is no special attempt to be decorative. The form is beautiful, and yet function plays the major role.[21]

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[18] Chris Reid, 'Songs Beyond Words', *RealTime*, No. 70, 2005, p. 42
[19] Saito, p. 262
[20] Hideyuki Oka, *How To Wrap Five Eggs: Japanese Design in Traditional Packaging*, photo. by Michikazu Sakai, trans. by Atsuko Nii & Ralph Friedrich, New York: Harper & Row, 1967, p. 186
[21] *Ibid*., p. 13

In the same way the composition of the song cycle seeks to respect both the inherent abilities and idiosyncrasies of the specific performers and their instruments. One of the most literal gestures to this can be found in Song 4 in Movement V, in which the soprano drops five eggs—the eggs have a dramatic function as well as creating a percussive accompaniment to the music (see Figure 5).
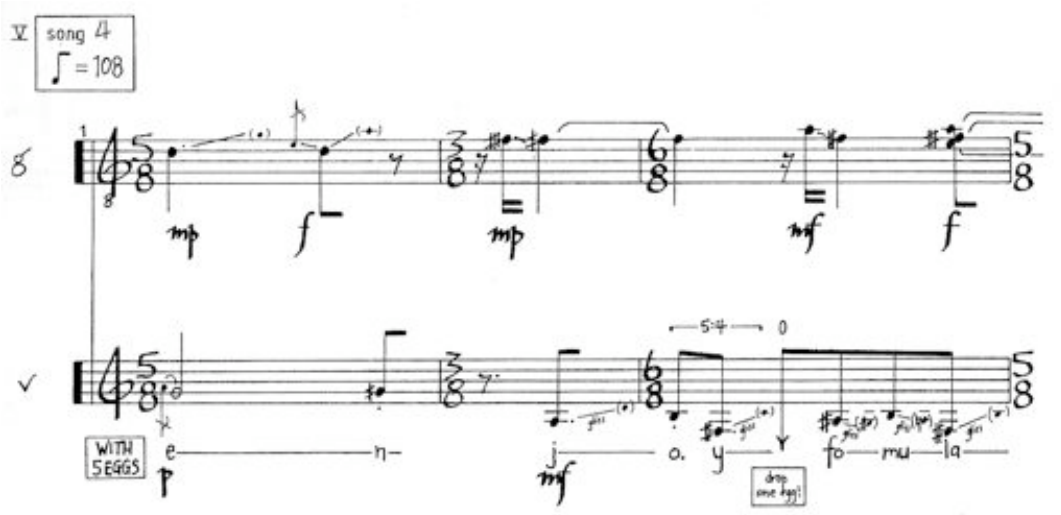
Figure 5. *Thousands of Bundled Straw*, Song 4, Movement V, bb. 1–3.

The Allure of the Hidden

Elegant or elaborate packaging can render ordinary objects extraordinary. However this is not only due to visual impact. 'Packaging, as a physical object, exists in space; however, the experience of handling the package involves an important temporal dimension.'[22] The in-time nature of unwrapping, and the anticipation and drama it can create, have influenced the architecture and detail of *Thousands of Bundled Straw*.

The traditional Japanese stroll garden is informed by a similar aesthetic sensibility and awareness. These gardens are 'often constructed by intentionally blocking or partially obscuring the scenic view or the tea hut by dense planting, giving the stroller only its hint or glimpse.'[23] In a similar way, the song cycle presents material at different points, from differing perspectives. Extended motifs and phrases recur in different movements of the cycle, each time rearranged, transposed or elaborated. There is a moment of stasis, almost a cadence, in bar 101 of Movement I. The clarinet softly plays an E natural, coloured with alternate fingerings. This is punctuated gently with a jeté double-stop on the violoncello (see Figure 6).

[22] Saito, p. 257
[23] *Ibid*. p. 258
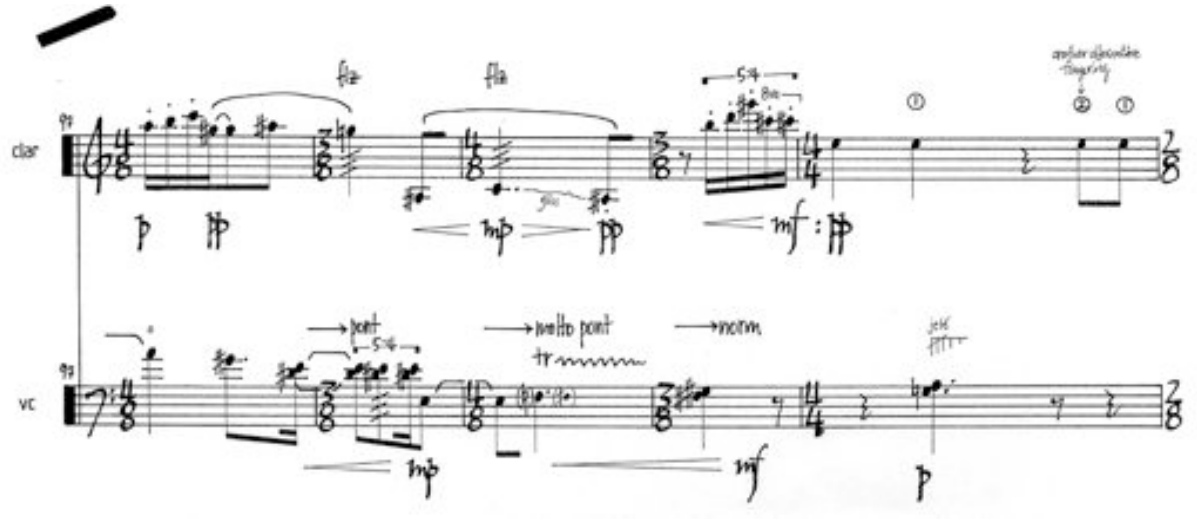
Figure 6. *Thousands of Bundled Straw*, Movement I, bb. 97–101.

Later, in bar 165 of Movement III, the soprano says the word 'floating' for the first time, preceded by the ensemble fluctuating around the pitch of E natural. Then in Song 5 of Movement V, there is an extended rearrangement of material from the first Movement that culminates in bar 24 with the soprano 'floating' on E natural, with a jeté-like strumming on the guitar (see Figure 7).

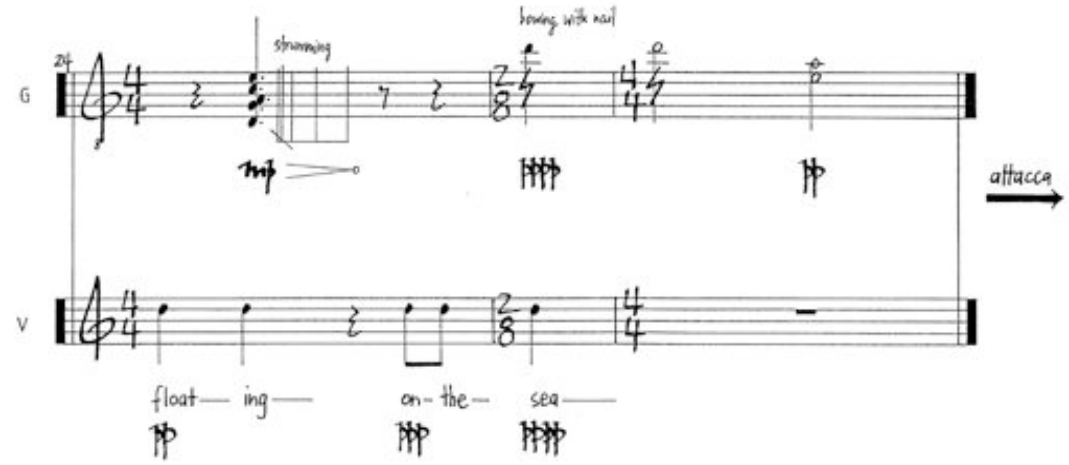

Figure 7. *Thousands of Bundled Straw*, Movement V, Song 5, bb. 24–6.
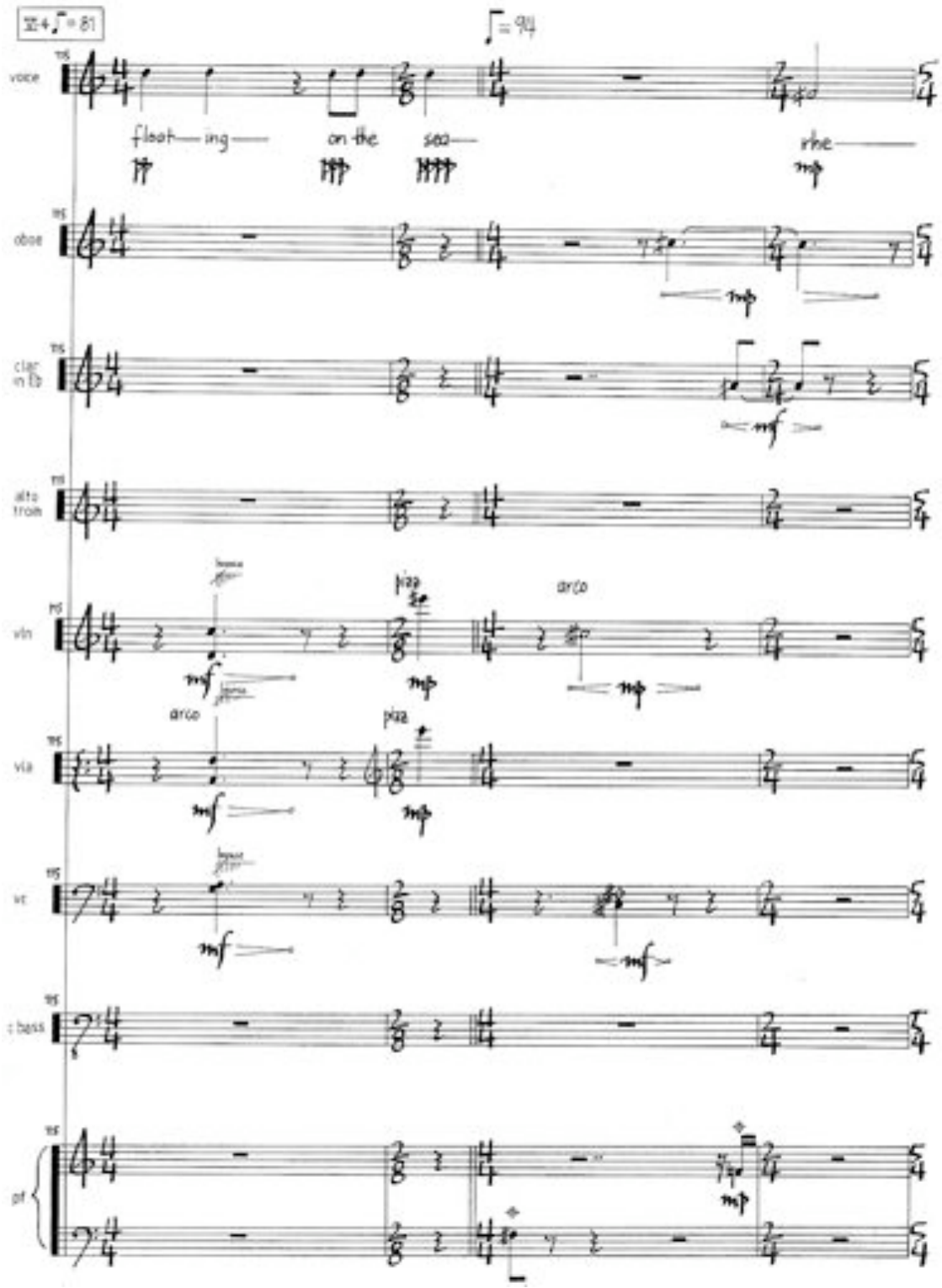
Figure 8. *Thousands of Bundled Straw*, Movement VI, b. 115-8.

There is a fuller exposition of this phrase in bar 115 of Movement VI (see Figure 8), and finally a melismatic and extremely elongated echo in the last movement at bar

54 (see Figure 9). In this last iteration the soprano has risen to E quarter-tone sharp, supported by quarter-tone harmonies in the ensemble.

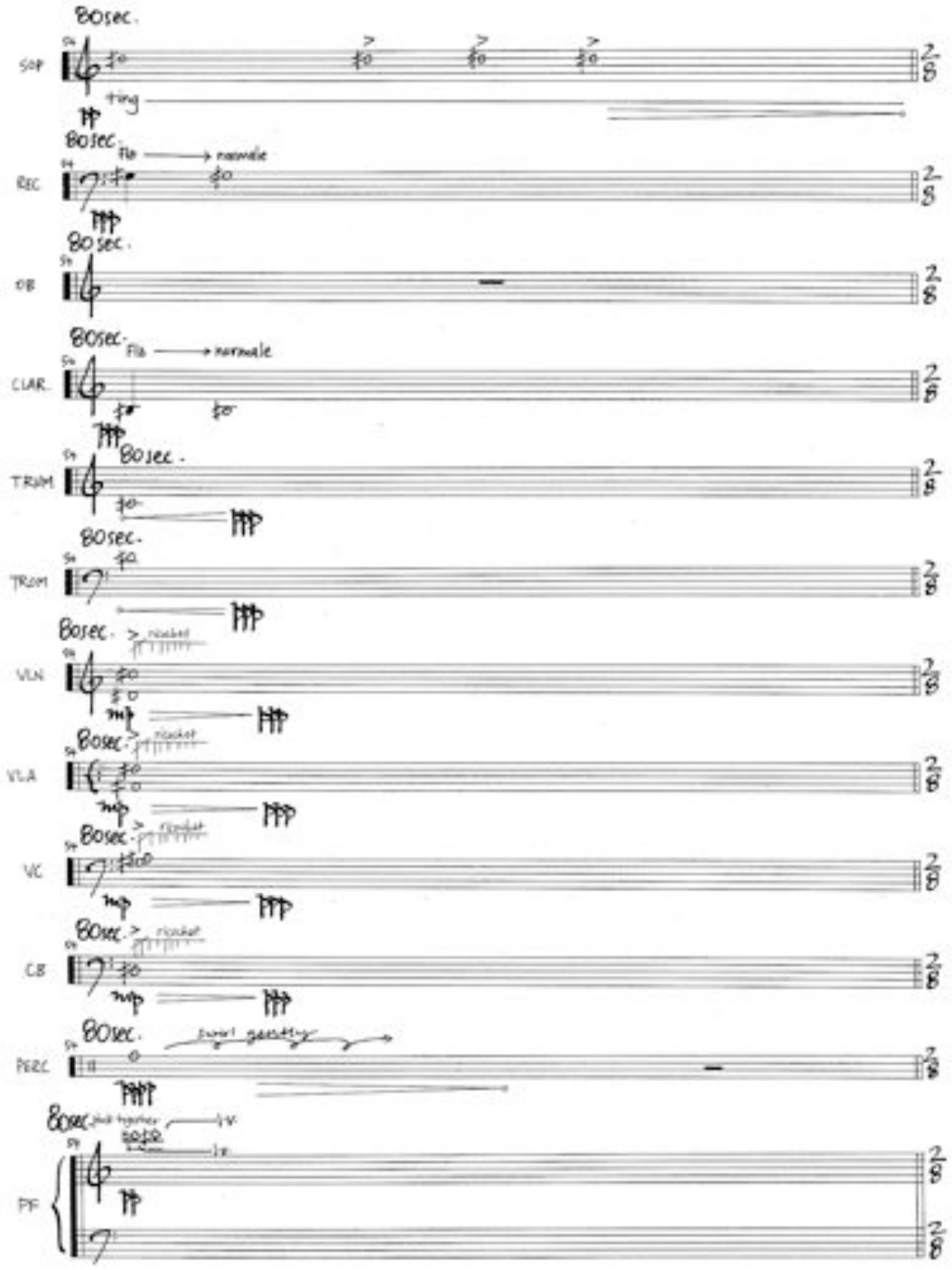

Figure 9. *Thousands of Bundled Straw*, Movement VII, b. 54.

The rising pitch and quivering stasis of this 80 second-long bar give the sense of slowly drifting away out of sight. Each 'floating' moment occurs at the same

structural point in the respective movements—the three-quarter mark in terms of duration. This example of glimpsing material at different stages from new perspectives is a device employed throughout the song cycle. Pitch, gestures (such as the jeté), words, and even textual sources and languages (English, Japanese, French, Italian), can have structural as well as harmonic or timbral functions. Strands of material are brought together fleetingly, woven into patterns, and then frayed and unravelled.

Text and *Libretto*

The *libretto* is comprised of an array of 'found' texts; a discussion of these textual sources opens the intricate musical material of the song cycle overall to analysis and interpretation. These textual sources represent a cluster of ideas that has been formative to the conception and structure of the work. The fragments of text that form the *libretto* in the song cycle play a number of different roles. For the purposes of this discussion, the 'texts' refer to the (usually literary) sources of conceptual inspiration, as distinct from the '*libretto*' which refers to the written text in the score sung by the soprano.

As a *libretto* compiled from multiple sources, poetic, semantic and narratological conventions are generally not applied.[24] Fleetingly suggested stories or narratives create dramatic shapes which inform the work compositionally. The use of words periodically throws up images in an impressionistic manner. The *libretto* also functions as a series of signposts or footnotes to the creative process and the conceptual underpinning of the work.

The literary and textual sources for *Thousands of Bundled Straw* include short stories by Italo Calvino, writing by Georges Perec, the tourist brochure from *Ichibata-Yakushi* temple in Japan, and the aforementioned 'Bourbon Cookies' biscuit packet. These sources have informed the song cycle conceptually; as structuring devices; and as sources of stories or narrative imagery.

The text in Italian comes from *Palomar* (*Mr Palomar* in the English translation) by Cuban-born writer, Italo Calvino.[25] Calvino's 'compositional' approach to his writing has provided inspiration to many composers, for example, Richard Rijnvos' *Palomar*, 27 pieces for nine violins.[26] The *Palomar* chapters have an underlying structure, as Christopher Fox outlines in his discussion about the music of Richard Rijnvos:

> Calvino himself provides a postscript to *Mr Palomar* in which he draws the reader's attention to the shift in focus from chapters which (1) 'correspond to a visual experience... the text tends to belong to a descriptive category' to those which (2) 'contain anthropological elements... [and] take the form of a story' and those which (3) 'involve more speculative experience... [which] move into the area of meditation'. These three 'thematic areas', as Calvino calls them, are then arranged hierarchically across the book as a whole. Each thematic area is predominant for nine successive chapters; each of these larger sections is then sub-divided again so that each thematic area is

[24] For reflections on narrative in music see Keith Potter, 'The Pursuit of the Unimaginable by the Unnarratable, or Some Potentially Telling Developments in Non-developmental Music', *Contemporary Music Review*, Vol. 15, Parts 3–4, pp. 3–11
[25] Italo Calvino, *Palomar*, Milan: Einaudi, 1983
[26] Richard Rijnvos, *Palomar*, 27 pieces for nine violins, Amsterdam: R2, 1994

> of secondary importance in three successive chapters; in each set of three chapters the thematic areas are again successively explored at a subsidiary level.[27]

Thousands of Bundled Straw draws specifically from the chapter in which Mr Palomar observes two turtles making love in his garden: '*Gli amori delle tartarughe'*, the first chapter in the second section, '*Palomar in giardino'*, of the first part or thematic area, '*Le vacanze di Palomar'*. According to Calvino's underlying structure, its thematic focus is primarily visual and descriptive, with a subsidiary focus on story-telling and the anthropological.

Calvino was a member of the OuLiPo group ('*Ouvroir de la Littérature Potentielle*', or the 'Workshop for Potential Literature') founded in 1960 by François Le Lionnais and Raymond Queneau. Amongst other literary experiments and games, a characteristic of Oulipean work is constraint-based writing. This is an approach which requires the author to choose and adhere to a set of rules or constraints. Accordingly, an algorithmic, random, or otherwise unwilled process controls or at least heavily influences the resulting text.

Another member of OuLiPo was French writer Georges Perec, whose writing also influences and appears in *Thousands of Bundled Straw*. Of particular significance to the song cycle's conception as well as *libretto* are the epic novel *Life A User's Manual*,[28] the 'e'-less *A Void*,[29] and *A Gallery Portrait* from a collection of short stories titled *Three*.[30]

The Temple of the Healing Eyes

Although no less significant, a less conventionally 'literary' source that plays a role in *Thousands of Bundled Straw* is a tourist brochure relating to a Rinzai Zen Buddhist Temple of the Myoshin-ji sect.[31] This temple is in north-west Japan, in the prefecture of Shimane, near a city called Hirata, on a mountain overlooking Lake Shinji. The temple is the *Ichibata-Yakushi*, or 'Temple of the Healing Eyes'.

As mentioned earlier, the *Ichibata-Yakushi* tourist brochure describes the history of that temple, and relates a myth about a fisherman, called Yoichi. Fragments of this text form parts of the *libretto* throughout the song cycle. The brochure appears to

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[27] Christopher Fox, 'Square Dances: an introduction to the music of Richard Rijnvos', *The Musical Times*, 1999, Vol. 140, No. 1869, p. 22–30

[28] Georges Perec, *Life A User's Manual*, trans. by David Bellos, London: Collins Harvill, 1987, first published in French as *La Vie Mode d'Emploi*, Paris: Hachette/Collection P.O.L., 1978; all subsequent references are to the 1987 translation and edition.

[29] Georges Perec, *A Void*, trans. by Gilbert Adair, London: Collins Harvill, 1994, first published in French as *La Disparition*, Paris: Denoël, 1969; all subsequent references are to the 1994 translation and edition.

[30] Georges Perec, *Three: The Exeter Text: Jewels, Secrets, Sex; A Gallery Portrait; Which Moped with Chrome-Plated Handlebars at the Back of the Yard?*, trans. by Ian Monk, intro. [to *A Gallery Portrait*] by David Bellos, London: Collins Harvill, 1996; *The Exeter Text: Jewels, Secrets, Sex* first published in French as *Les Revenentes*, Paris: Juilliard, 1972; *A Gallery Portrait* first published in French as *Un Cabinet d'Amateur*, Paris: André Balland, 1979; *Which Moped with Chrome-Plated Handlebars at the Back of the Yard* first published in French as *Quel Petit Vélo à Guidon Chromé au Fond de la Cour?*, Paris: Les Lettres Nouvelles, 1966; all subsequent references are to the 1996 translation and edition.

[31] The Myoshin-ji sect is the largest of the fifteen schools of Japanese Rinzai Zen Buddhism. The sect's head temple was founded in 1342.

be an imperfect English translation of the same brochures in Japanese, and it is the imperfect English, or 'Japlish', that has been employed as *libretto*.

> About 1100 years ago, a fisherman called Yoichi was living with his blind mother in the Sakaura village on the coast north of Mt Ichibata. One day he happened to find a statue of Buddha floating on the sea. After he carefully took it and kept it in his small house, very strange things started to occur around him. He had a mysterious message in a dream one night, which said that; 'Jump down from the Hyakujo cliff, then your mother's bad eyes will be opened.'
>
> Yoichi thought that it must have been a message from the Statue of Buddha he had found. He tied thousands of bundled straw [sic] onto his body and prepared to jump as instructed in the Buddha's message. People of the village tried to persuade him not to jump, and his mother upon hearing of his plan, rushed to him and told him to give up his plan. However, Yoichi finally jumped from the top of the cliff. He fell over and rolled down onto a rock near the sea. His mother rushed to him, and Yoichi took her with his arms, at which time his mother's eyes were open.
>
> Eventually, Yoichi found and chose the site where the Temple is located, established a small shrine, and laid the Statue in it. He was ordained as a Tendai tradition monk, and he re-named himself 'Honen'.[32]

According to the *Ichibata-Yakushi* tourist brochure, Yoichi's story took place in 894 AD on the Akaura beach, two and a half kilometres north-west of the temple. The Zen Buddhist temple complex is said to house the original statue that Yoichi found and which spoke to him in his dream, referred to as the Statue of *Yakushi-nyorai*, or 'Healing Buddha'.

All of these texts used as verbal source material and activated text in the song cycle share certain characteristics. The texts are employed conceptually, incorporating themes of boxes within boxes, and telescoping frames of reference. Text is also used as a structuring device, providing aural reference points and clues to the musical architecture. Finally, the texts provide stories and narrative imagery that is employed programmatically, impressionistically and for dramatic effect.

The Song Cycle's Title

'Thousands of bundled straw' is a direct quotation from the *Ichibata-Yakushi* tourist brochure—in order to fulfil his task and jump off the cliff, Yoichi wraps around him 'thousands of bundled straw'. Grammatically incorrect English of this kind is often described as 'Jap-lish'—a Japanese mangling of English. However this expression from the brochure is immediately comprehensible; in fact the bundling of 'bundled straw' (as opposed to 'bundles of straw') adds a poetic intensity to the expression. The idea is conveyed even more richly than if it were grammatically exact. This slippage, where something is slightly askew—in this case grammatically—plays on the desire for transparent meaning and comprehensibility. Allowances can be made for the grammatical error, rendering

[32] This portion of the text from the tourist brochure is reproduced on the *Ichibata-Yakushi* Buddhist Temple's website: <http://www.ichibata.org> [accessed 19 February 2006].

it almost invisible, unnoticeable. This desire is often at play in the use of text in the cycle. The text is available as an array of powerful, quite precise poetic images, and simultaneously available as an array of physicalised sounds—made with the tongue, the teeth, the vocal chords—that point to cultural meanings and narrative impulse, but that are unpredictably transformed into completely abstract instrumentalised musical material.

The use of this particular title is at once a provocation and a play on the desire for transparent narrative and programmatic meaning. The fulfilment of that desire is delayed, as with opening a biscuit packet or seeking the inner sanctum of a temple complex. The 'biscuit'—the destination, the vanishing point—is not the purpose of constructing the song cycle, but rather the elaboration of the different avenues and permutations that desire can take as it moves towards its object, that supposed end point which keeps vanishing further the closer we approach.

According to the temple's tourist brochure, the statue of Buddha found by Yoichi is housed in an inner temple, in which there is another smaller temple, in which there is an altar, in which there is a smaller altar, in which there is a box, in which there is a container. The statue is said to reside in this container, and only put on display once every hundred years (the last time was in 1983). Given the unlikely prospect of living to see the statue in 2083, the idea of the statue becomes more powerful than its actuality. There is a power and an attraction, an impulse, to want to see this statue and therefore verify its existence, but all that we can apprehend are its trappings and frames. Never seeing the statue but knowing that it is in the temple requires a leap of faith, or more secularly, a leap of the imagination.

The 'Jap-lish' in the title is therefore a signpost, a kind of warning that the text in the song cycle throws up images and ideas that are suggestive but not necessarily directly comprehensible. Frequently fragmented and collapsing, the audible text demands that the listeners fill in the gaps and draw their own conclusions.

Mr Palomar

One narrative at work in the song cycle comes from Mr Palomar's reflections on the relationship between two turtles in his garden. His reflections zoom in on progressively smaller, more detailed minutia, such as individual blades of grass. These reflections evoke a philosophical love story, sensual yet strangely objective, just as the hard shells of the turtles belie their capacity for intimacy.

In Song 1 of Movement V (see Figure 10), the first song for voice and guitar, the opening line is a direct quote from the Italian translation of Calvino's *Palomar*. It is an introduction to the two turtles near the patio. The percussive knocking on the guitar and the soprano's tongue clicks echo the knocking and clicking of the violoncello and clarinet from the opening Movement of the cycle:

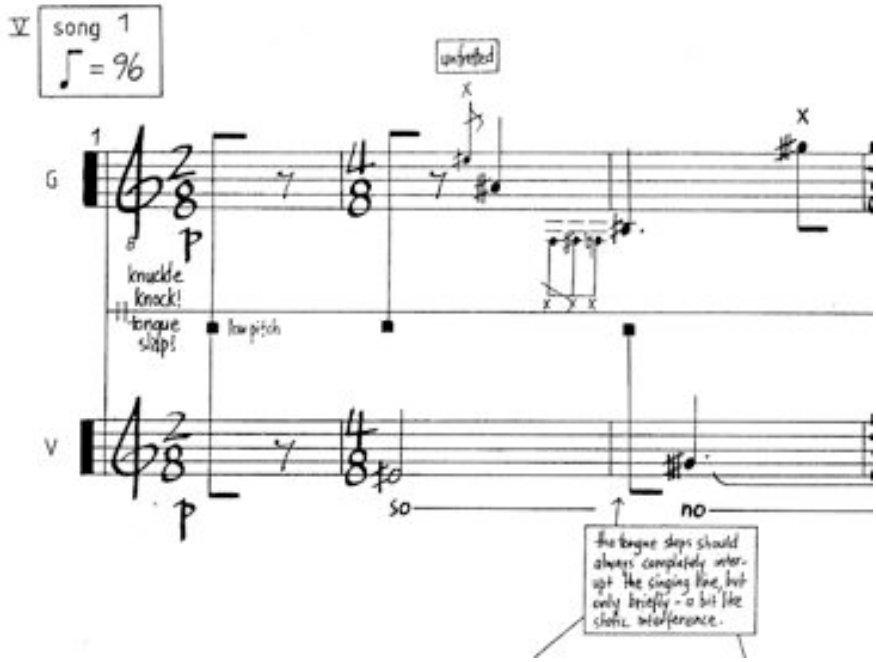

Figure 10. *Thousands of Bundled Straw*, Movement V, Song 1, bb. 1–3.

While the soprano sings in Italian, the words are more or less comprehensible. The description of what is occurring is reinforced by the tongue slaps, the clicking by the soprano, as well as the percussive knocking played at regular intervals by the guitarist. The image described in the text is being supported musically.

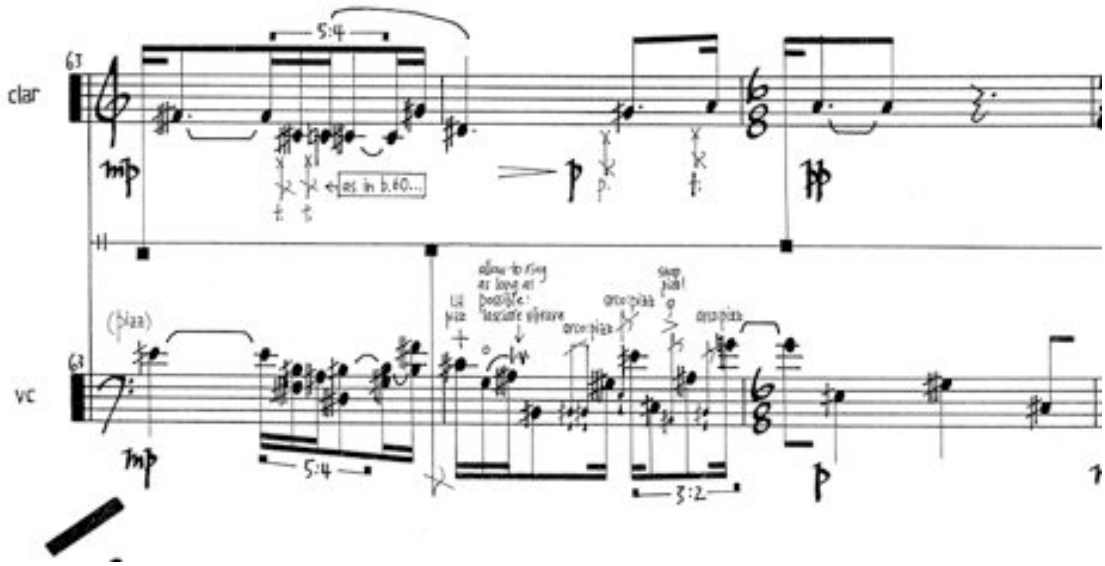

Figure 11. *Thousands of Bundled Straw*, Movement I, bb. 63–5.
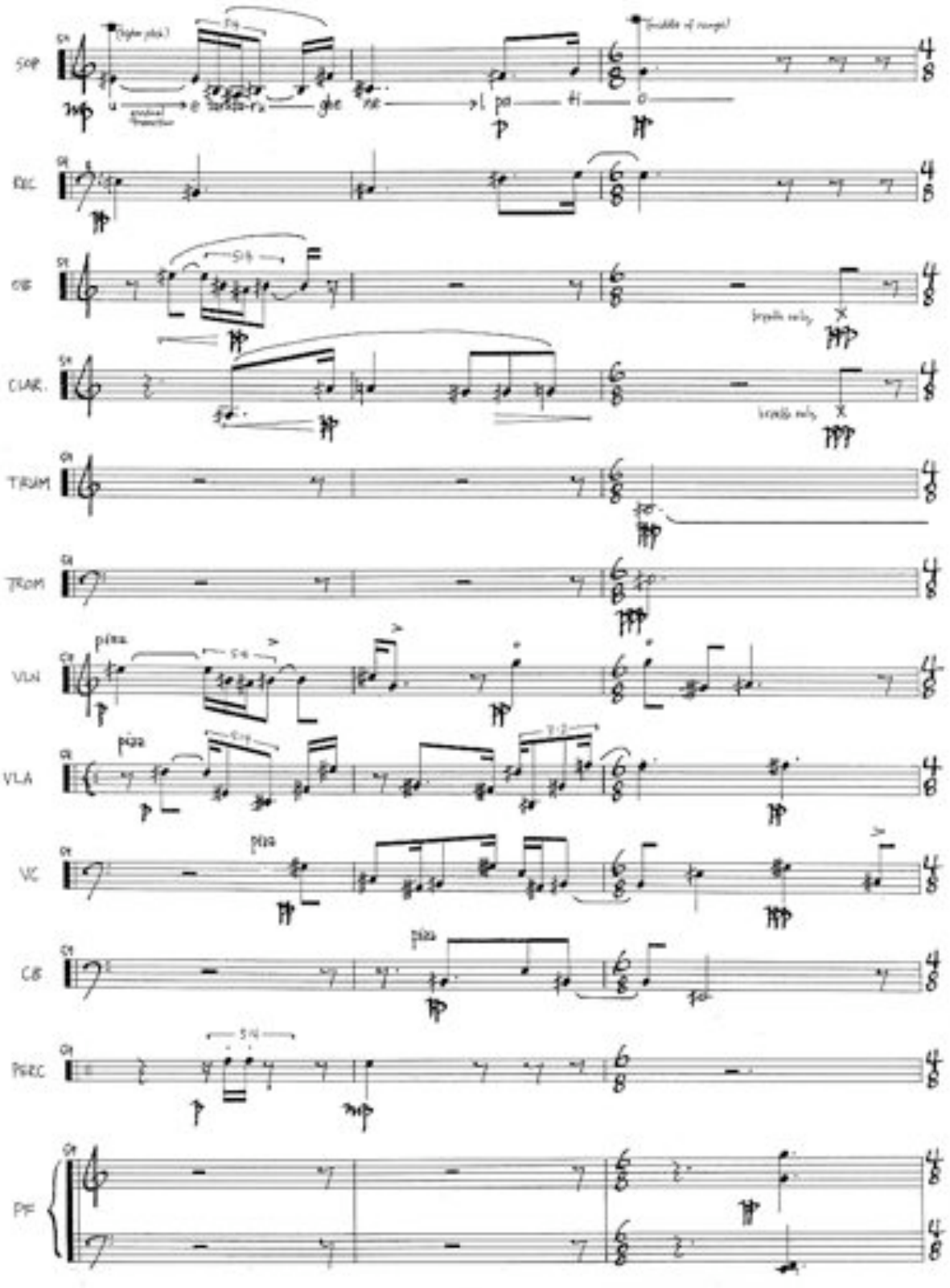
Figure 12. *Thousands of Bundled Straw*, Movement VII, bb. 59–61.

As a duo for female voice and guitar, the chamber quality of the writing is conceived as a very intimate musical object between two people. The intricacy of the musical gestures, as well as the hushed dynamic, demand attentiveness. Furthermore, there is an interlocking of the parts where the percussive effects—the tongue slap and the knocking on the guitar—alternate, creating questions and answers. The guitar and vocal part interlock, constantly moving with each other and becoming entwined. This intertwining is also present in the arrangements of the song in Movement I (see Figure 11), and at the very end of the song cycle in Movement VII (Figure 12):

With these examples, there is a constant shifting in and out of focus, as the turtles' relationship, or the gallery portrait zooms in and telescopes—the focal point keeps moving. What is audible of the text then becomes fragmented: for example, we hear '*o—e—femina*', which suggests a woman; '*Slack! Slack!*' is a textualisation of the percussive effect. This phrase is prefigured by the clarinet in Movement I with the use of tongue slaps (Figure 13). In the fifth Movement, Song 1, bar 10, the knocking is amplified into an articulation or word (Figure 14).

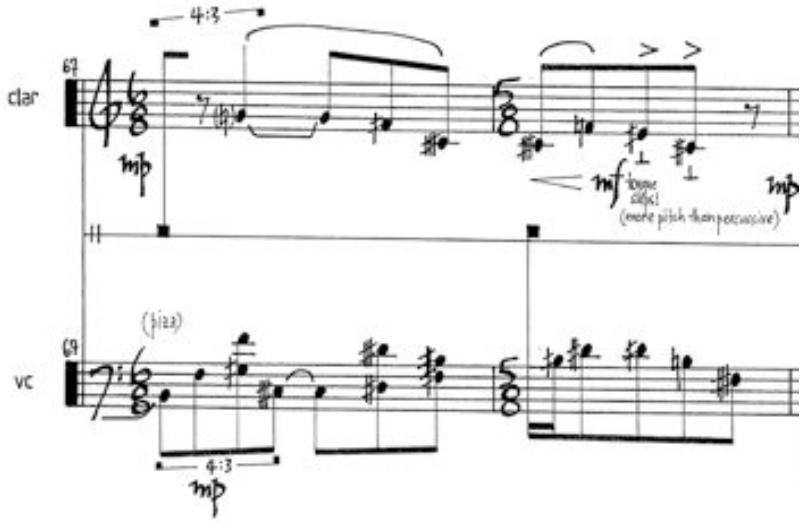

Figure 13. *Thousands of Bundled Straw*, Movement I, bb. 67–8.
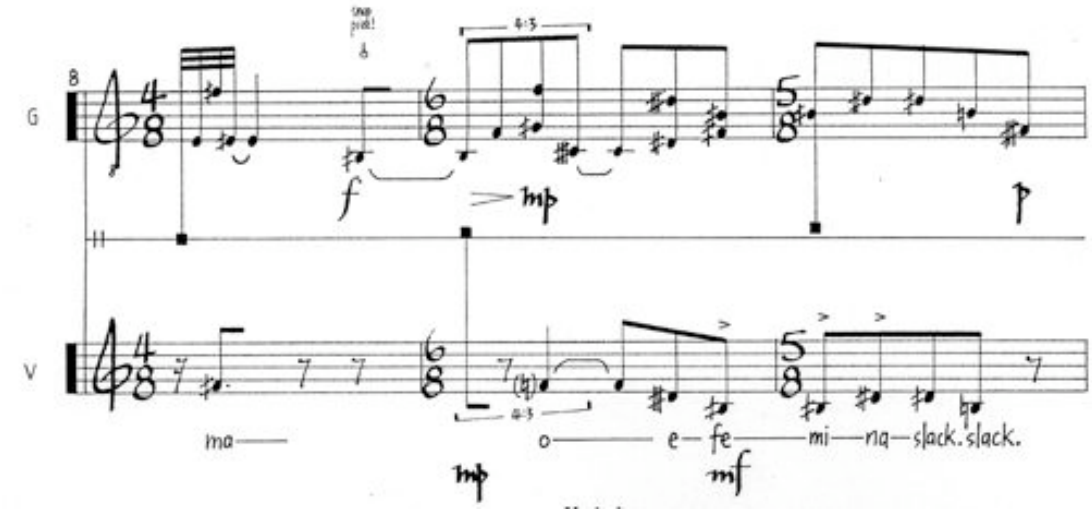
Figure 14. *Thousands of Bundled Straw*, Movement V, Song 1, bb. 8–10.

However, no sooner do the words become comprehensible—come into focus and suggest that the listener could understand them—than they fragment and recede, becoming more difficult to understand as they are elongated, or the natural rhythm of the language distorts them, or they are completely warped by the musical rhythm.

At bar 14–6 (Figure 15), the vocalist sings '*e la stagione degli amori'* ['and the season of lovers'], however the rhythm has shifted and the interlocking with the guitar take the words a little further from reach.

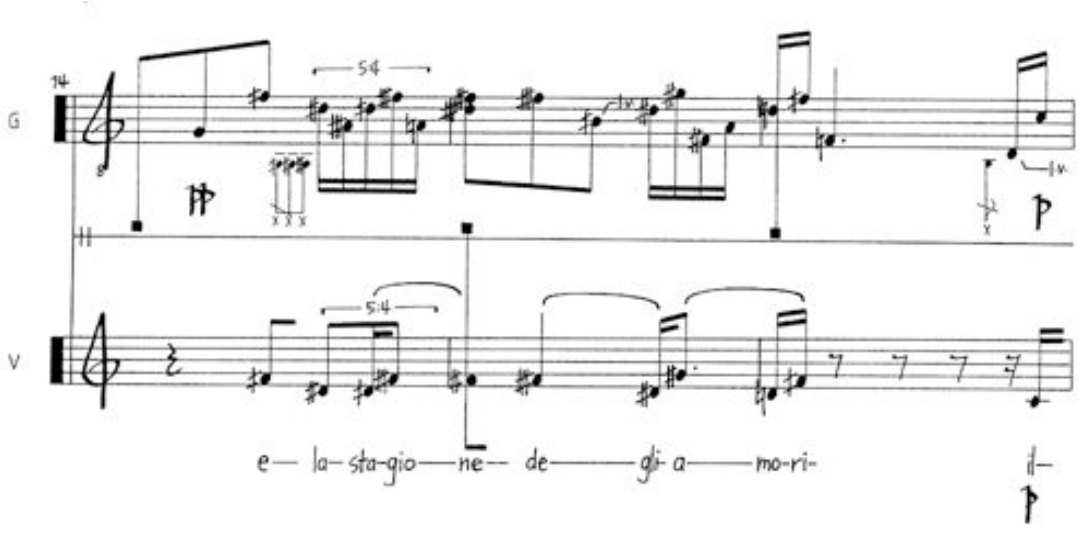

Figure 15. *Thousands of Bundled Straw*, Movement V, Song 1, bb. 8–10.

At bar 17, there is an explicit reference to Palomar, that is Signor Palomar himself. However this reference is already buried within the work, occurring as it does

only in Movement V, near the Golden Section of the 56 minute cycle. The duo of the first movement, for clarinet and violoncello, is a prefiguring of this song which is heard first. To a certain extent this first song functions as a point of arrival, having a literal quotation from the Calvino text, and a literal image of the turtles which is musicalised (the knocking, the tongue slaps). In the first Movement of the song cycle, these knocks and slaps have already been heard, but not in a literary or a narratological sense; only in an abstract musical sense.

By the time this first song is heard, it is in some way familiar, and therefore clearer or more in focus. The song for clarinet and violoncello is elongated for over for six minutes (Movement I), and then heard later for voice and guitar with words that can or almost can be understood

Narrative also has an architectural role in the song cycle and relates to the composition's structure. There is no single protagonist being evoked through the song cycle, nor is there a developmental narrative of character, or place or drama in a conventional sense. The textual sources are keys to the conceptual terrain being explored through the medium of musical composition and performance. And yet specific textual quotations in the song cycle also open the work out to these literary and philosophical locations, which have been both intellectual and physical aspects of the genesis of the work.

The texts are in effect footnotes to the creative process, but also they provide very specific, albeit fleeting, postage stamp-sized images that have narrative and picturesque potential, such as the two turtles making love, or the fisherman jumping off the cliff. The text adds another edge of potential meaning or suspended meaning, engaging the listener, and indeed the reader of the score.

A Gallery Portrait: Telescoping Frames of Reference

Thousands of Bundled Straw plays constantly with shifts in the scale of imagery and aural events. It is organised as a series of telescoping frames, such that perspectives shift and change with apparently unpredictable ease. This is the way in which Perec structures *A Gallery Portrait*; in this story the literary form reflects the narrative focus on portraits within portraits. Similarly, Calvino's *Mr Palomar* gradually peers more and more closely at his garden with its amorous turtles amongst the blades of grass.

There are relationships between the microstructure of the song cycle and its macrostructure. However, these relationships are not necessarily organic or cellular, in the sense of intervallic cellular structure in, for example, Edgard Varese's work for solo flute, *Density 21.5*.[33] Instead the song cycle is a predetermined and 'built' structure with distinct and dramatic shifts of frame.

A Gallery Portrait opens with a description of Pittsburgh, Pennsylvania, in 1913, and quickly moves to the history of an eminent townsman, local brewer and art-lover, Hermann Raffke, who commissioned a portrait of himself sitting in his gallery of paintings. The painting is included in an exhibition of paintings in the suites of the Bavaria Hotel, and then, in the words of the anonymous writer of the exhibition's catalogue, we 'are in for a wonderful surprise:'

[33] Edgard Varese, *Density 21.5*, for solo flute, Ontario: Kerby, 1936

> For the artist has put his painting in the painting, so that the art collector, sitting in his gallery, has in his line of sight, on the far wall, the painting which represents himself looking at his collection of paintings, then all of the paintings themselves reproduced again without any loss of precision through the first, second and third reflections, until they are nothing more than minute brush-strokes on the canvas. *A Gallery Portrait* is not just the anecdotic depiction of a private collection, it is also, in its play of succeeding reflections and in the near-magical charm that these increasingly miniscule repetitions create, a work of art which tips us into its own oneiric universe where its power of seduction has been amplified to an infinite degree and where the agonizing precision of the medium, far from being an end in itself, suddenly opens out into the vertiginous spirituality of the Eternal Return.[34]

The durations of the seven movements of the song cycle are structurally based on the precise reflections in Perec's *A Gallery Portrait*, and its inexorable movement towards a vanishing point. The durations of the song cycle's seven movements correspond proportionally to the durations of the seven songs for voice and guitar in Movement V. Indeed the songs for voice and guitar can be understood as a song cycle within the song cycle. Furthermore the fifth song of the fifth Movement is also divided into seven sections with corresponding durations, and so on (see Figure 16).

Therefore the notional vanishing point in the song cycle takes place from the second to the fifth quaver beats in bar 16 of Song 5 in the fifth Movement. There is a moment of stasis at this point, the soprano having reached a climax in the song's phrasing. As the guitar sounds a G natural harmonic, the soprano's sustained high A natural begins to vanish into a series of staccato grace note inflections.[35]

Unlike *A Gallery Portrait*, the song cycle 'vanishes' in a non-linear manner, just before the Golden Section in terms of duration. The vanishing point occurs as the song cycle unfolds in time. Perec's story gradually unravels as it progresses, becoming more and more focused on details and minutia until we are left with a list of the results of the post-exhibition auction. The vanishing point seems to be at the close of the story. However, the vanishing point in the portrait itself exists outside or beyond the story altogether. Indeed, it is an elusive *conceptual* point, a seductive vortex which inevitably attracts the reader even as it creates bewilderment. This conceptual vanishing point is represented in the song cycle by the soprano's collapsing grace notes in Song 5.

[34] Perec, *A Gallery Portrait*, pp. 130–1
[35] *Thousands of Bundled Straw*, Movement V, Song 5, b. 16

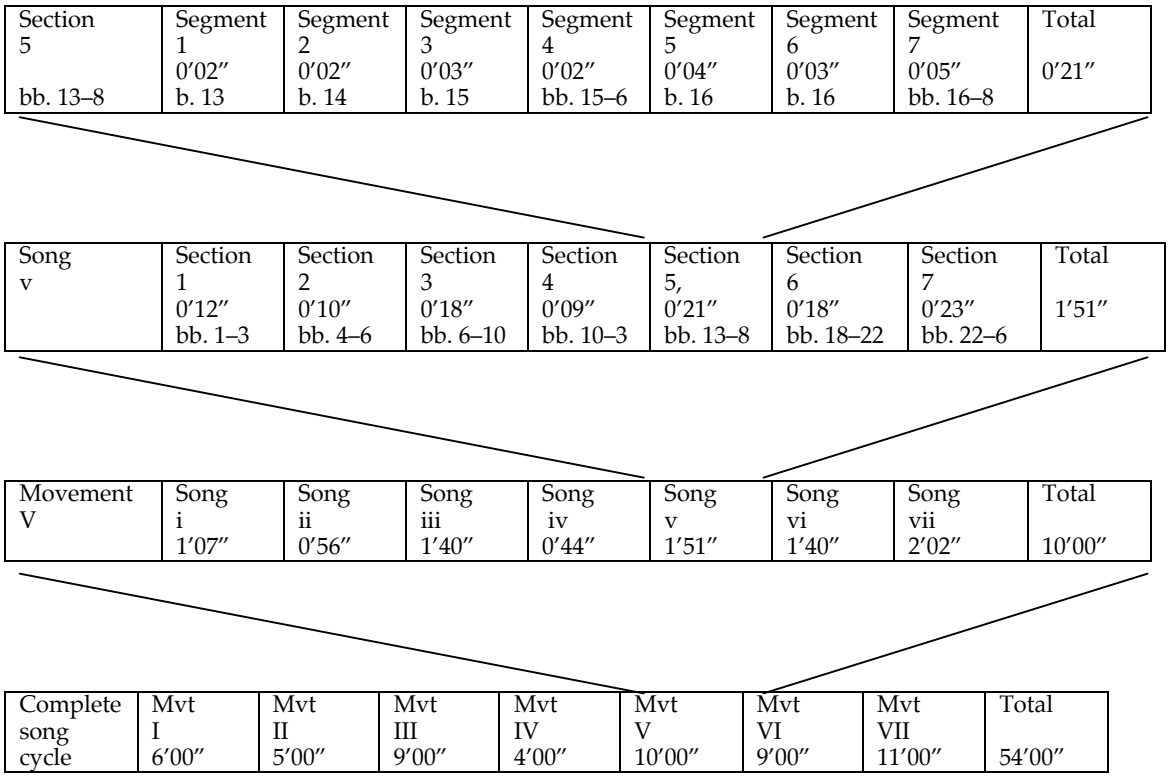

Figure 16. Durational proportions in *Thousands of Bundled Straw*, Movement V.

Life A User's Manual

Each literary source for the song cycle generates its own variations on the strategies for *libretto*, narrative or architecture. One such variation is in the third Movement, in which the literary source functions quite differently to the use of text in the *Palomar* song. Movement III for voice, oboe, violoncello and pianoforte is structured after Perec's *Life A User's Manual*, which moves systemically through six different floors of an apartment building in Paris. Perec describes in excruciating detail the contents and occupants of the rooms and even stairwells, including fragments of recent and distant histories, as well as occasional glimpses of their futures. Although Perec's novel runs to nearly 600 pages, he is describing a single moment in time, as though time has stopped and the reader is wandering around the apartment block, able to see everything frozen in time.

In the quartet for Movement III, the ensembles move through an imaginary or virtual apartment block, with six 'floors'.

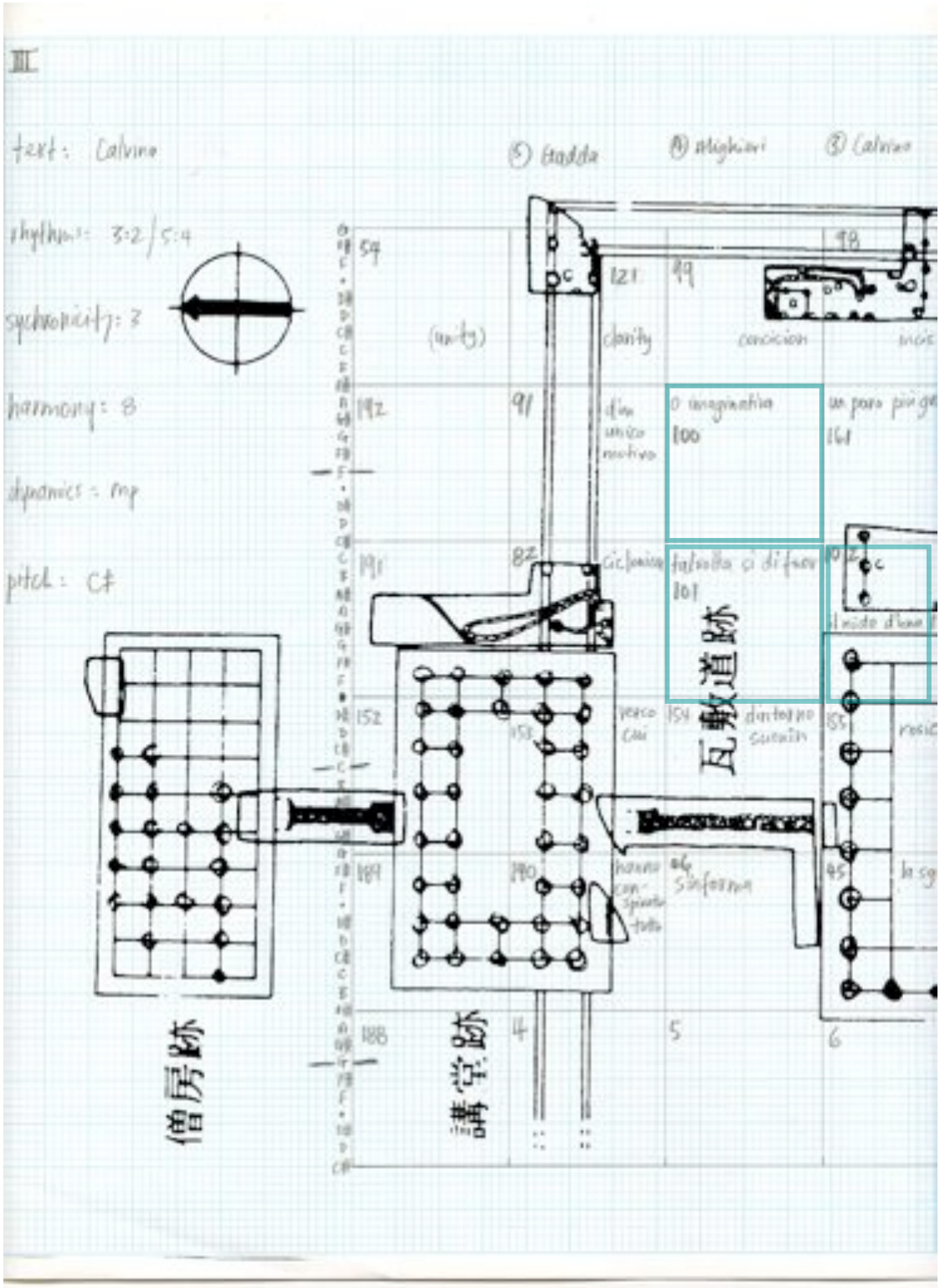

Figure 17. Excerpt from sketches for *Thousands of Bundled Straw*, Movement III.

Each 'floor' is assigned a different text which functions as a signpost for the respective floors. Text in Italian from Calvino is only heard on a particular level of the apartment (the 'third' floor sketch in Figure 17).

Similarly, each box is assigned differing musical parameters (articulations, attacks and decays, quarter-tones and *glissandi*) as well as differing instrumentation (see Figure 18).

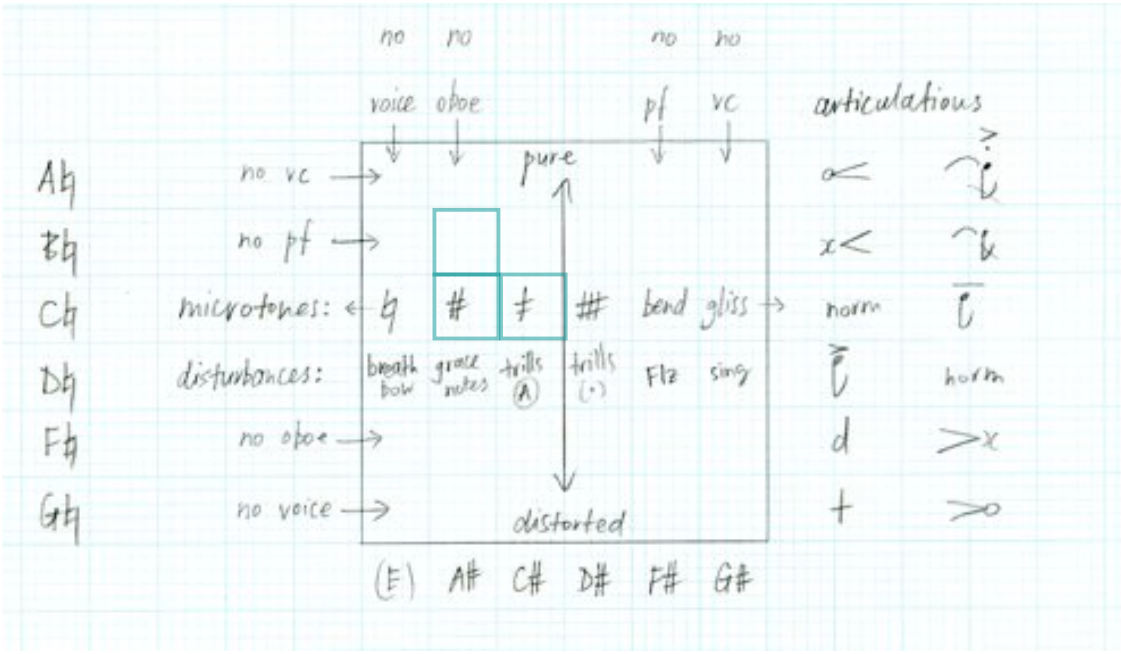

Figure 18. Excerpt from sketches for *Thousands of Bundled Straw*, Movement III.

Overlaying these sketches, each bar combines the assigned parameters, text source and instrumentation, not unlike Calvino's structuring device for *Palomar* or Perec's architecture for *Life A User's Manual*. Bar 100 (see Figure 19), for example, is in the second row, third column from the left in Figure 17. The text, '*o imaginativa*' is from Calvino, as indicated for this, the 'third' floor (see 'III' in top lefthand corner). There are three synchronous *icti* between the voice and oboe; dynamic is mezzo piano. Then in Figure 18, the table assigns no pianoforte for this box; almost entirely pure tone; use of quarter-tones; crescendo attack, etc.

Bars 101 and 102 (Figure 19) also follow these rules, with the instruments also articulating the shapes defined by the archaeological temple map–in this case the instruments are articulating Kanji characters.
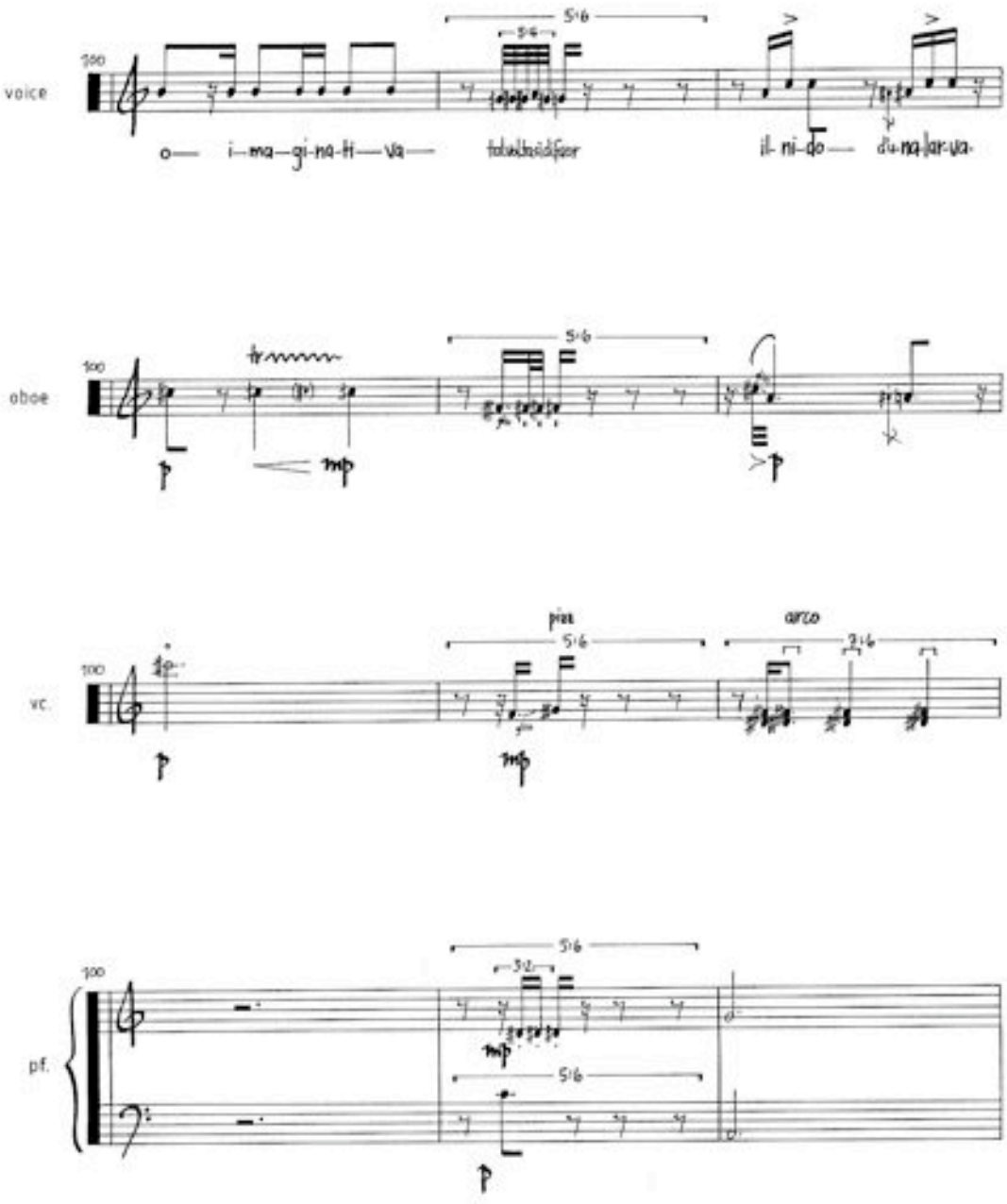
Figure 19. *Thousands of Bundled Straw*, Movement III, bb. 100–2.

When text from the English translation of Perec's *A Gallery Portrait* is heard, then it indicates another floor; when text from the myth about Yoichi the fisherman is heard, it marks yet another floor or level, and so on. The cumulative effect is rather like rapidly changing television channels. The text, rather than being used as a literary way of evoking a poetic concept, is being used as a navigational tool, as a sound device, as a motif. This textual navigation is reinforced by other musical parameters.

Text functions as a musical parameter in the same way as dynamics or timbre or pitch. Text has been appropriated as another musical parameter as opposed to a *libretto* or literary source. Of course it also evokes other things, and resonates across the song cycle, but in a sense that is incidental to its particular structural purpose and construction in this Movement especially.

Another source of text employed in Movement III is one of Perec's most idiosyncratic novels, *A Void*. Written in French without once using the letter 'e', this feat of linguistic contortion was, perhaps even more remarkably, translated into English by Gilbert Adair. In an homage to Perec, Movement III of *Thousands of Bundled Straw* has no 'e's in the *libretto* nor amongst the pitches.

Dramatic Hinges

In the song cycle as a whole, the function of the text moves between that of poetic evocation to abstraction. There is a continuum of textual comprehensibility which is at its most clear in the first song of Movement V. This is a moment at which the listener may think, at last 'yes I can understand this'; there is a transparency which is reinforced by the intimate instrumentation. Moving outwards, both forwards and backwards from that first song, the text becomes more fragmented and in fact dissipates. At the outer extremes of the song cycle (in Movements I and II there is no voice or text, only instruments), and in the last Movement there is some text, but its extended melismatic nature makes it very difficult to understand semantically.

In bar 13 of Movement III, the soprano says 'Oh, look, an albatross in flight'. It is not sung, it is spoken at mezzo forte in a completely declamatory fashion. Such exposed spoken text is difficult <u>not</u> to understand. It is given to the listener transparently. Yet it is so disconnected, so surreal in content, that it demands we connect it with other seemingly disconnected declamations. These declamations occur throughout the Movement at intervals based on the Fibonacci series (bars 2, 3, 5, 8, 13, 21, 34, 55, etc.). These otherwise unconnected spoken sentences are musically connected because of the way in which they are expressed, because of the way in which they occur in the work. They function as dramatic hinges and markers of the progress of the song cycle at that point. They appear to the ear in a completely contrasting manner to the musical material that surrounds them.

Cataloguing the Textual Elements

The first and second Movements of the song cycle have no text, no voice. The third Movement introduces the soprano, and the text for the first time. Part of the structural intention is to use this Movement as a catalogue of the techniques used with text in the song cycle—a catalogue of the techniques that the listener will encounter in more sustained ways through their experience of the song cycle.[36]

Unlike the first song (Movement V) which is all in Italian and relatively homogenous textually, Movement III includes some Italian, some English, pointillist and arrhythmic melodic lines, with variously melismatic, truncated and expanded text.

[36] Perec was employed as a scientific cataloguer and indexer for most of his adult life.

The third movement, in a way, is a setting forth of the musical conceptual vocabulary. From a text point of view, this is an introduction to material which is presented in a fragmented way, with many things floating around. Through the course of the movement the material gradually solidifies and is distilled, and through the course of the whole song cycle, in particular in the songs for voice and guitar, it appears to come into focus and is gathered together. The bewilderment that one experiences in Movement III is lessened gradually as the cycle progresses through to the fifth and then sixth and seventh Movements.

Ricefields

The title of the song cycle refers to a natural material used frequently in traditional Japanese packaging. During the harvest season it is common to see innumerable bundles of rice straw, elegantly tied and stacked vertically in the dusty, dry ricefields. The tee-pee shaped clusters lean and warp towards each other, giving them an almost unruly and whimsical appearance. Later in the harvesting process, these bundles are hung out to dry on makeshift bamboo racks. Lush, green, flooded ricefields are transformed into ordered, arid paddocks (see Figure 20). The stark contrasts between movements of the song cycle—the spareness of Movement III's quartet compared with the florid nature of Movement VI—to some extent represent the changing states of the ricefields through the seasons.

Figure 20. Harvested ricefields in Shimane Prefecture, Japan, photos by the author, 1997.

The aural and visual world of a ricefield at night is the inspiration behind many of the textures and shapes in the second Movement of the song cycle. This Movement is also a prelude or small overture to the installation/performance *Ricefields*, created in 1999 in collaboration with two visual artists, Rosemary Joy and Sarah Pirrie (see detail of the installation in Figure 21).

Figure 21. Joy, Pirrie, Young, *Ricefields*, installation view,
Natasha Anderson (bass recorder) and Peter Humble (percussion), photo by Yatzek, 1999.

In the opening bars (see Figure 22), the harmon-muted trumpet and steel-muted violin establish a still and quiet atmosphere. This is progressively interrupted by subtle activity such as lefthand *pizzicati*, flutter tongue timbres and gentle percussion, just as the seemingly silent ricefield at night is revealed to be full of small frogs leaping into water, dragonflies zapping past invisibly and the rustling of the wind. The musical setting becomes more programmatic with the entry of a temple drum, the constant quaver rhythm reminiscent of that used in Shinto rituals. The bass recorder recalls a *shakuhachi*, but all of these references remain beneath the surface, as though they are being overheard from a distance.

Another feature of the ricefield at night is the appearance of fireflies:

> The power of that still, striking, and yet silent night time experience of those bright, flickering fireflies, both present and demanding of attention without sound, was overwhelming.
>
> This experience occurred within the powerfully contrasting framework of a highly urbanised lifestyle replete with bullet trains and satellite dishes. It was a window into how I experience the world, of seeing things and then imagining how I could hear them.[37]

[37] Daryl Buckley, *Ricefields: Interview with David Young*, performance program, Brisbane: MetroArts, 1999, p. 2
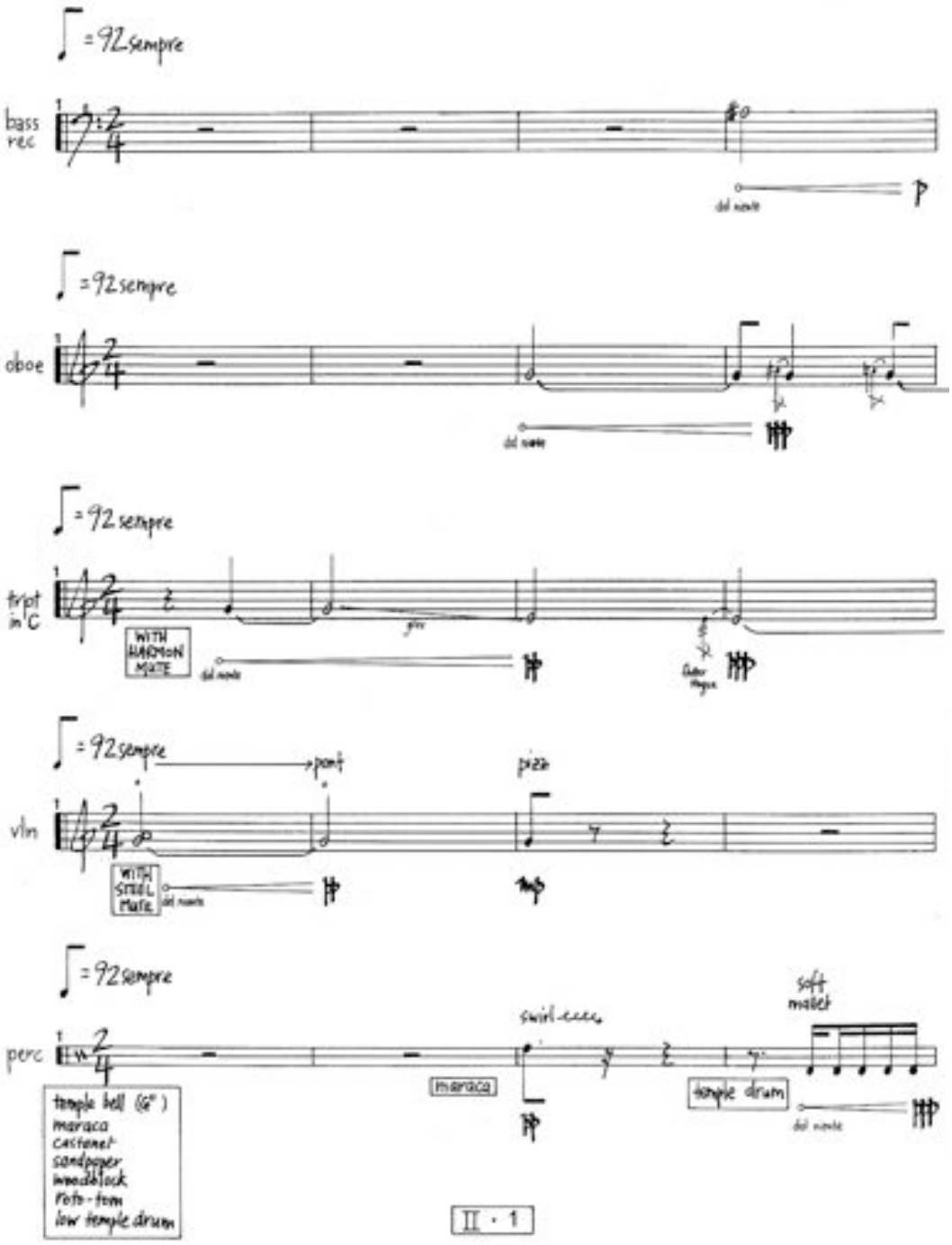
Figure 22. a. *Thousands of Bundled Straw*, Movement II, bb. 1–4.
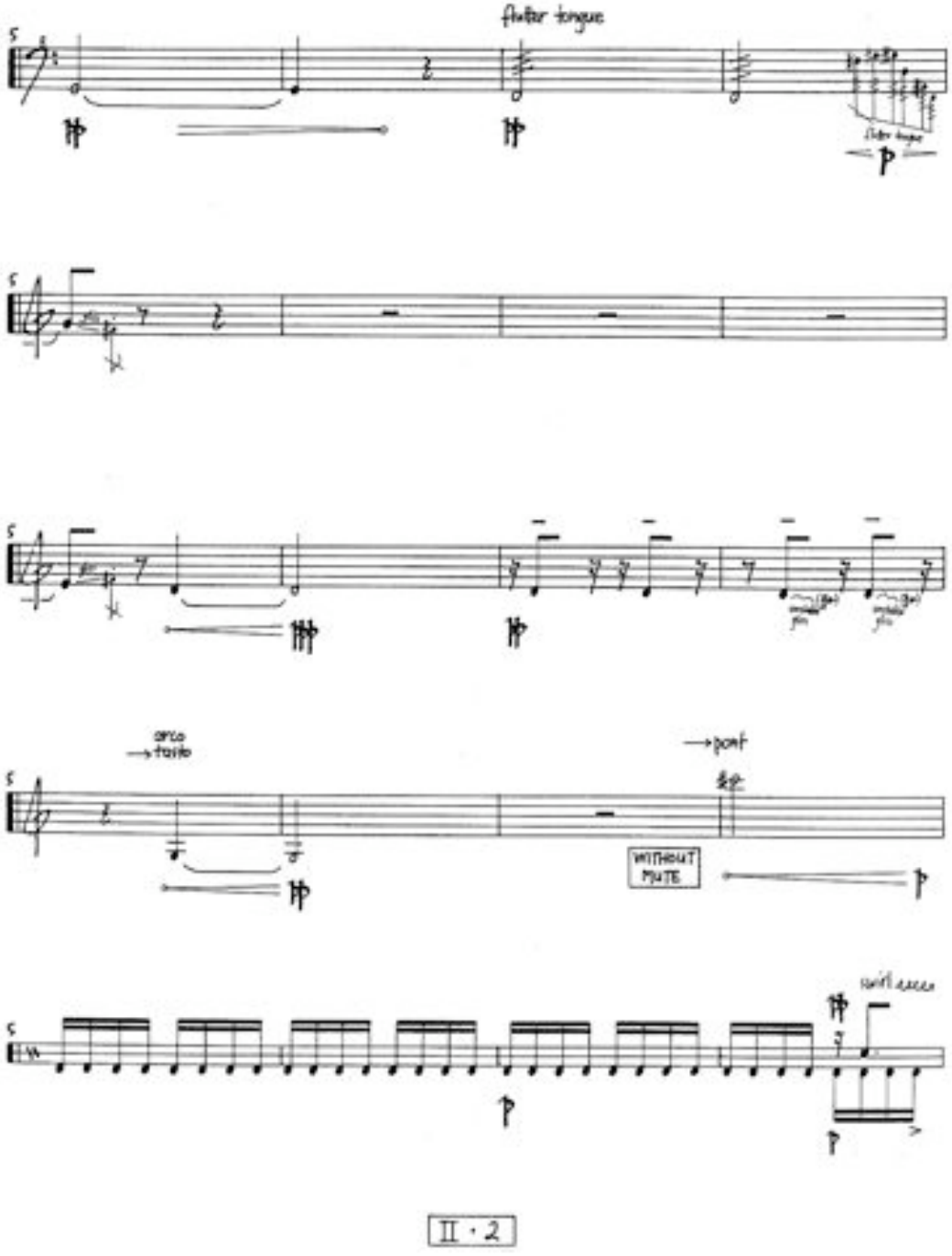
Figure 22. b. *Thousands of Bundled Straw*, Movement II, bb. 5–8.

The fireflies are like tiny distress flares, floating eerily through the blades of rice. Exploration with the percussionist Peter Humble led to associating these tiny flares with match strikes. While actual match strikes formed part of the *Ricefields* installation/performance, in Movement II of the song cycle, this white noise is created by rubbing sandpaper together (for example, see bars 14–24).

These ricefield-inspired effects recur in the last Movement: in bar 39 (see Figure 23). The bass recorder plays a constant quaver rhythm in unison with the temple drum, with interjecting *pizzicati* in the strings, repeated figures in the pianoforte and slow-moving chords in the wind and brass. However the taut rhythmic control of the second Movement is now more languid and unravelled, with the use of time-space notation and different tempi in these ensemble groupings.

The musical ideas explored in Movement II permeated the collaborative work with the visual artists which generated a continuum of approaches to music notation, as composer Juliana Hodkinson describes after seeing *Ricefields* in France:

> *Ricefields* includes prescriptive musical scores (composed, and written in meticulously detailed notation); suggestive musical scores (involving a combination of musical notation and graphic contours and shapes, colours and shades); surfaces which are used as suggestive texts to be 'read' in musical performance (a long rod, a segment of a Japanese temple ground-plan); objects to be 'read' by the performers and audience alike (brightly-coloured sponge flower-fruits, a message in a bottle); and ultimately, a full-length show which is offered to be 'read' by its audience.[38]

With this accumulation of material, cohesiveness was achieved through frequent reference to the sound world of the song cycle's second Movement, and the underlying template from which all the artists worked. In order to give the artists—all from different arts practices—a common substructure, a map of the Kokubunji archaeological site in the Izumo region of Japan was employed (see Figure 24). This template provided unifying proportions, contours and shapes that could be manifested in the sculptural installation, the positioning of the musicians in space, as well as the ordering of musical material, rhythmic gestures and melodic lines. These underlying connections were perceived by audiences, one writer remarking on '…a sense of score as written, sculpted, transparent, erasable, fixed yet improvised, readable everywhere in the installation, a set of endlessly interpretable codes, architectural and ethereal.'[39]

[38] Juliana Hodkinson, *Reading and Writing on Ricefields*, performance program, Melbourne: Aphids, 1999, p. 1
[39] Keith Gallasch, 'An eye on the ear', *RealTime*, No. 34, 1999, p. 61
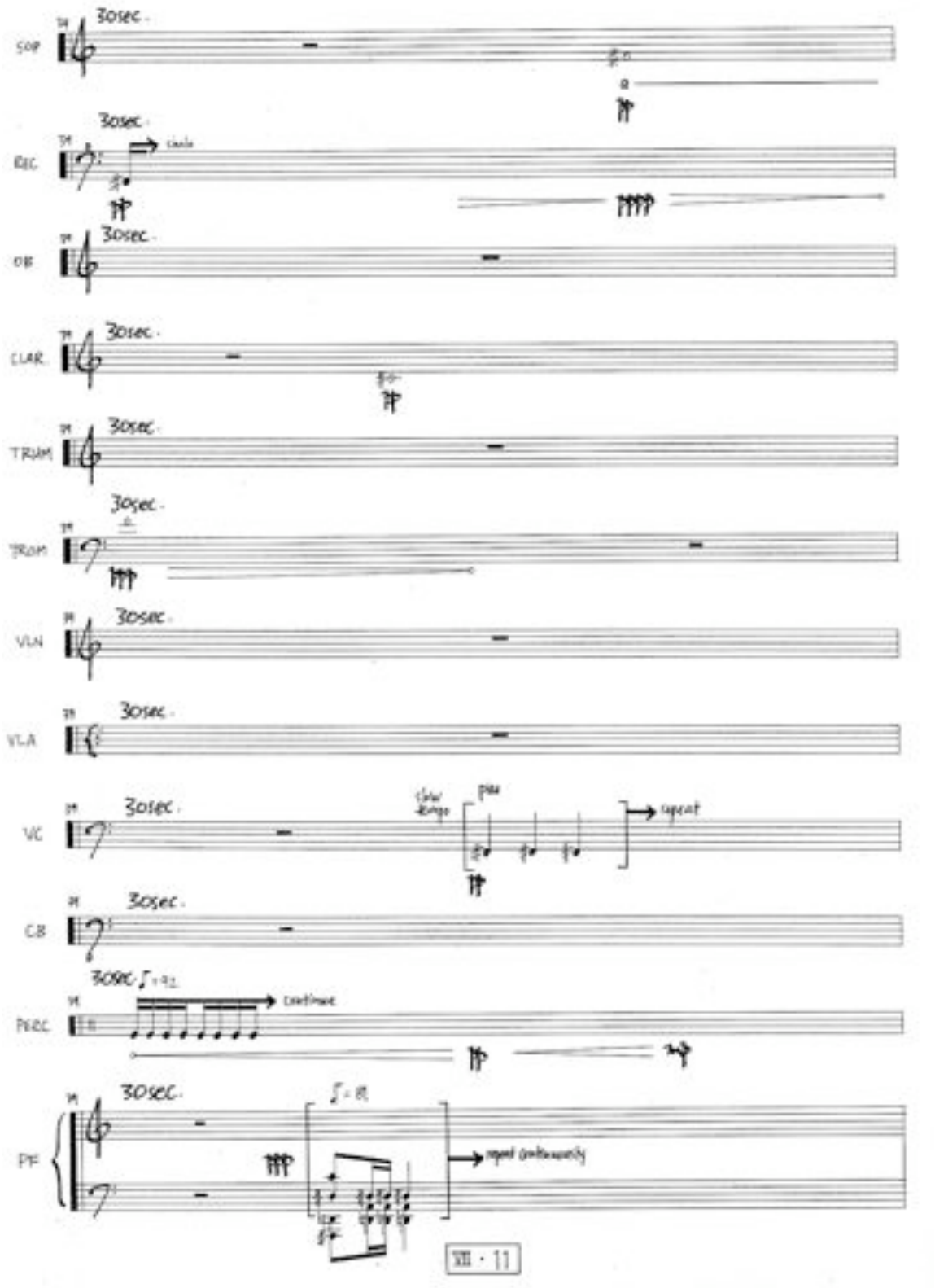
Figure 23. a. *Thousands of Bundled Straw*, Movement VII, b. 39.
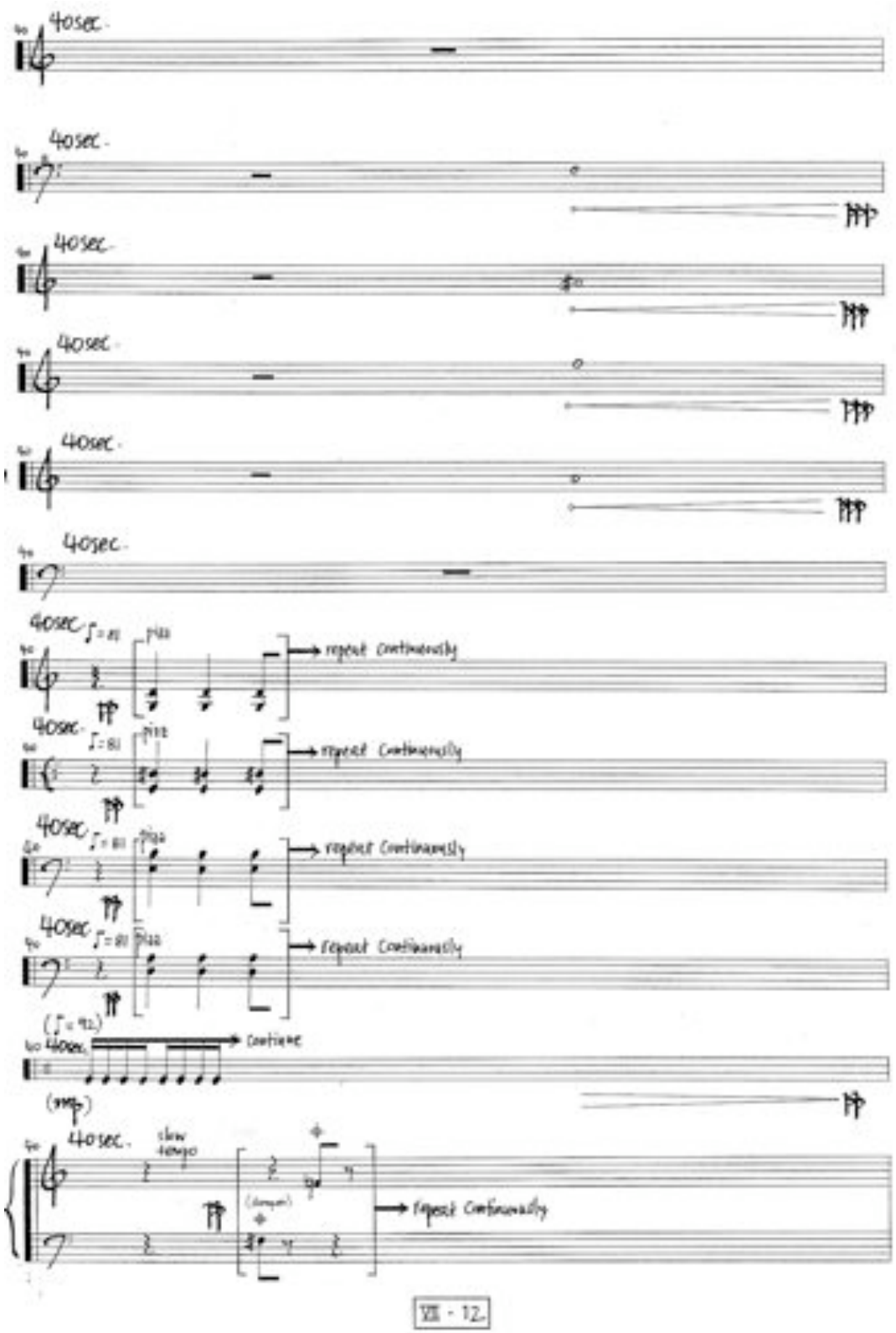
Figure 23. b. *Thousands of Bundled Straw,* Movement VII, b. 40.

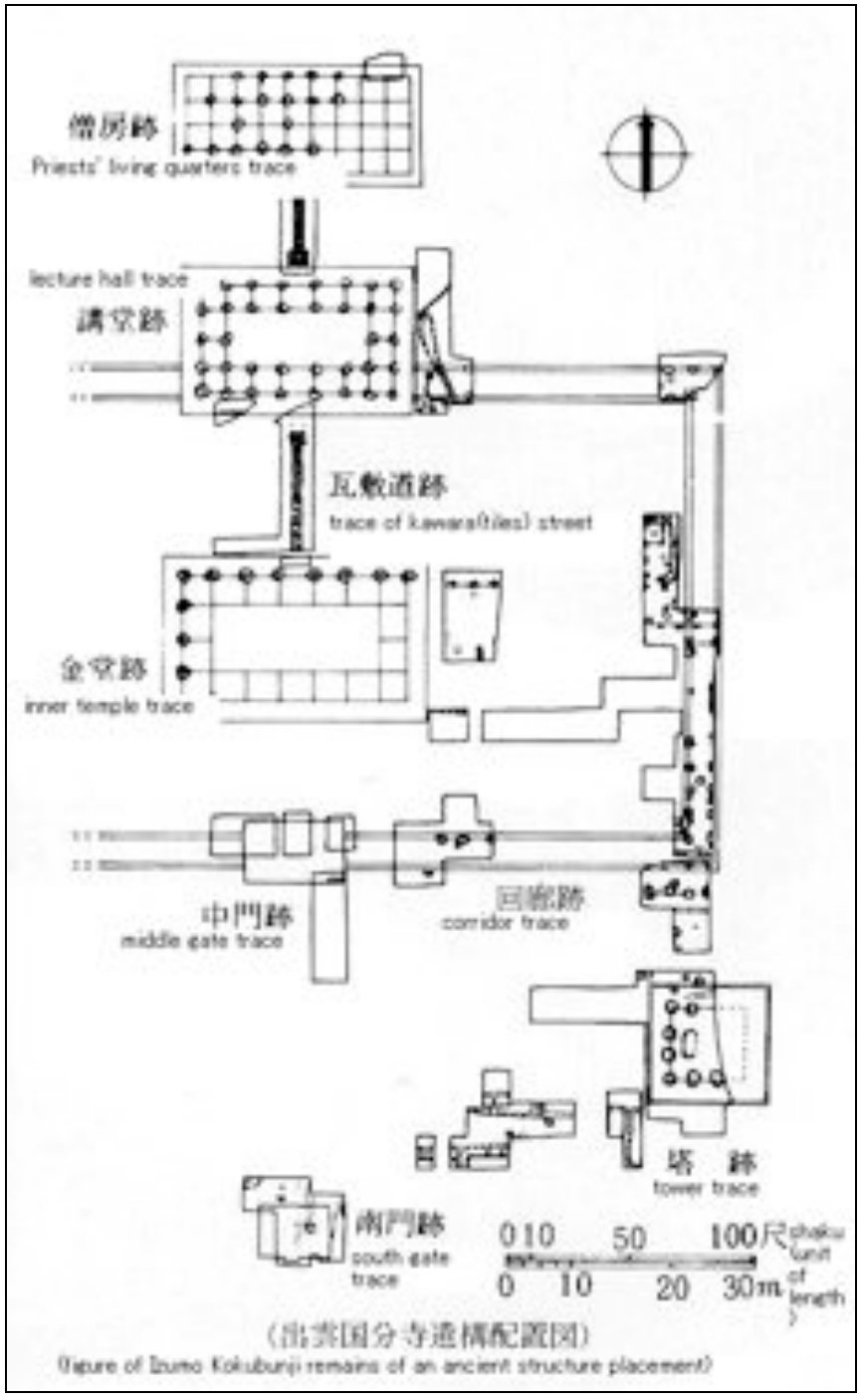

Figure 24. Map of the Kokubunji archaeological site in Izumo, Japan.[40]

In a number of movements in the song cycle, details from the Kokubunji map were transcribed into music notation. The sketch for bars 10 to 22 in Movement IV

[40] Hirano Hiroshi, Emiko Homma, Akira Katsube, Kayoko Kondo, Tatsunori Kurotani, Yoshihide Miyake & Sumio Yokoyama, *Guidebook of Yakumotatsu Fudoki no Oka: Invitation to Ancient Times*, Shimane: Yakumotatsu Fudoki no Oka, 1996, p. 70

(see Figure 25) shows how musical parameters were overlaid on to the archaeological traces, in this case the 'lecture hall' in the upper part of the map. Pitch is indicated by horizontal lines, each assigned to ascending notes in a quarter-tone modal sequence (from B quarter-tone sharp below the bass stave up to E quarter-tone sharp above middle C). Rhythm is determined by relative position within bars, indicated by vertical lines—the time signature of each bar appears above the top line: 3/4, 2/4, 3/4, etc.). The features on the map are colour coded to show instrumentation (brown for contrabass, red for bass clarinet, blue for tenor trombone, green for cor anglais and purple for viola).

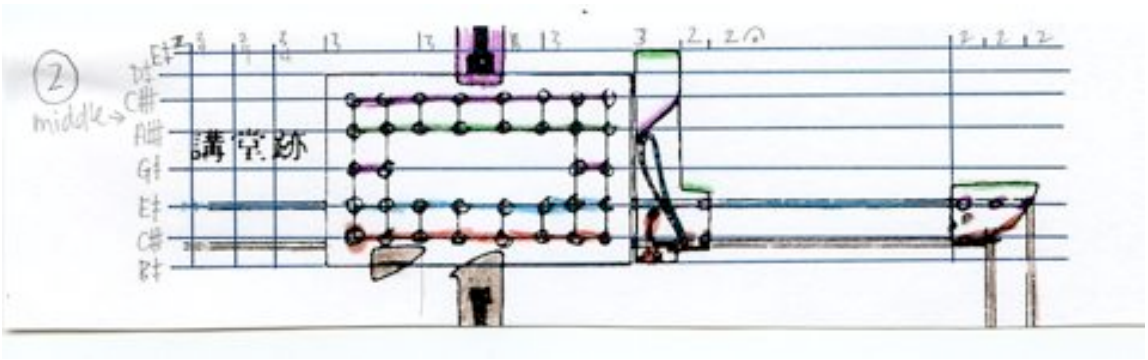

Figure 25. Sketch for *Thousands of Bundled Straw*, Movement IV, bb. 10–22.

The musical score closely follows the details on the map (see Figure 26). The tenor trombone and contrabass enter first at bar 10 (see the blue line on E quarter-tone sharp and the brown just below C three-quarter-tone sharp), with the remainder of the quintet approximating the Kanji character with grace notes, *glissandi* and *spiccati*. From bar 13, the grid with small circles is rendered musically as accented repetitions. In the middle of bar 14, the viola and contrabass play distorted scratches corresponding with the purple and brown shapes at the respectively highest and lowest points on this detail of the map.
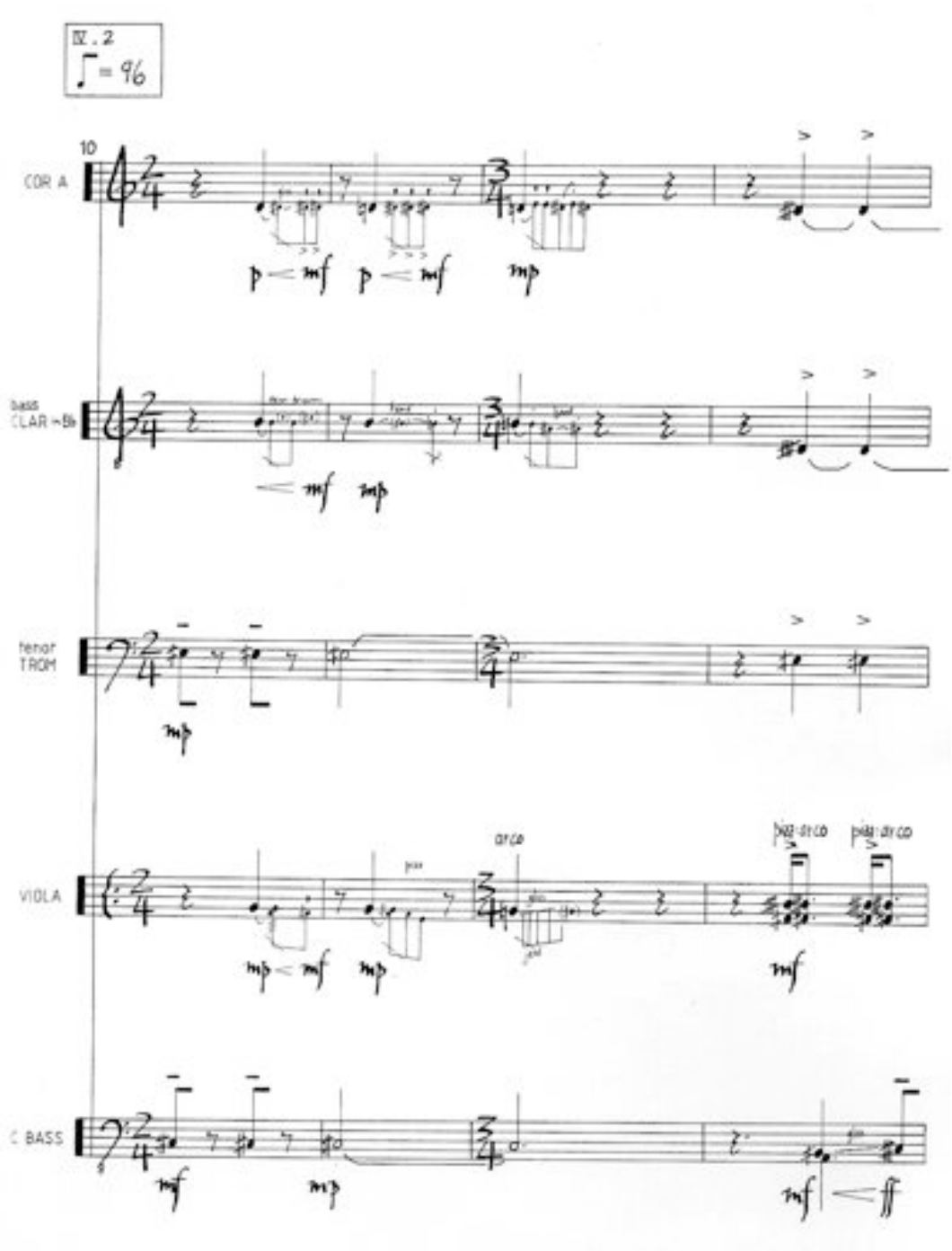
Figure 26. a. *Thousands of Bundled Straw*, Movement IV, bb. 10–12.
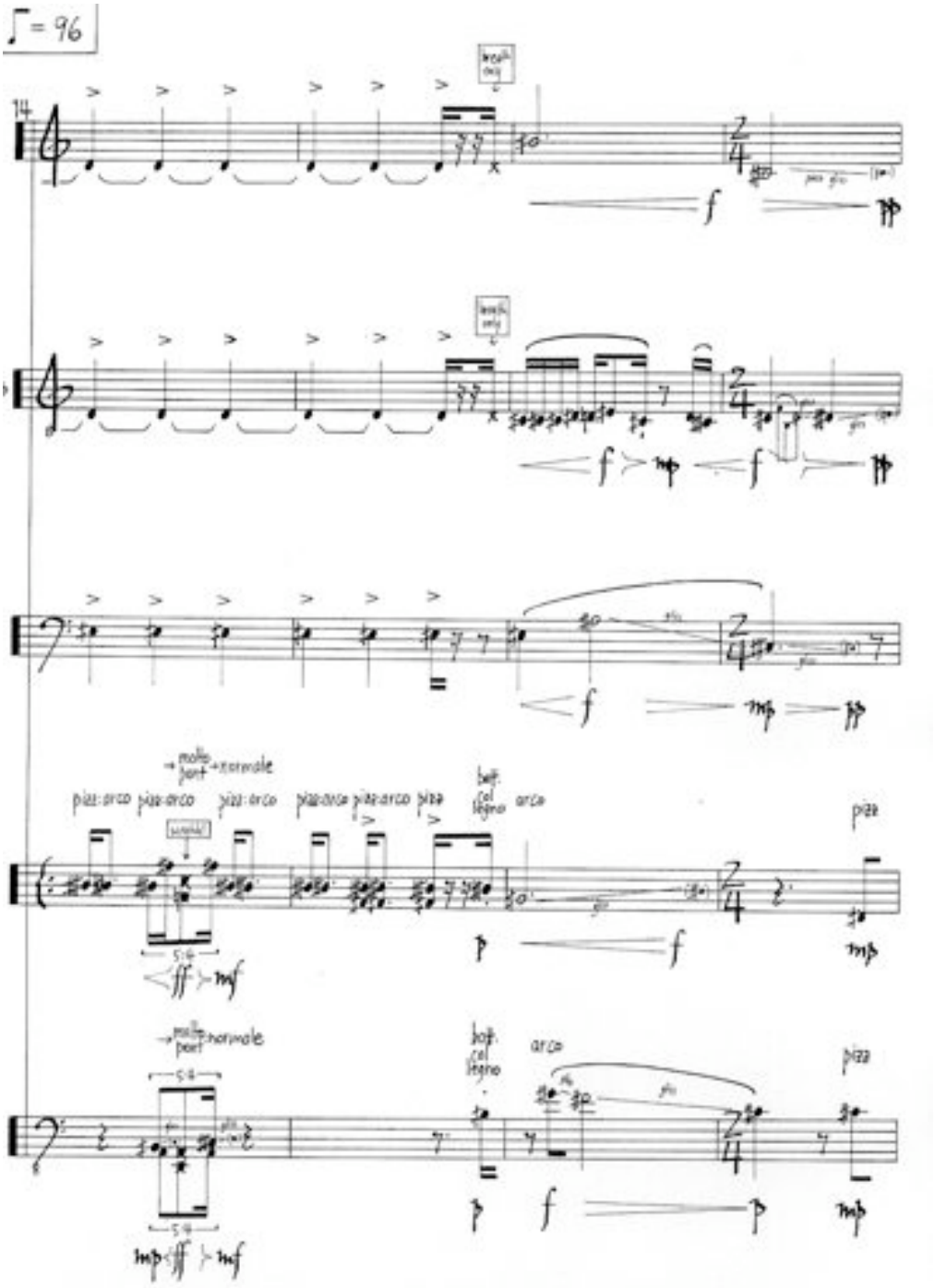
Figure 26. b. *Thousands of Bundled Straw*, Movement IV, bb. 14–17.
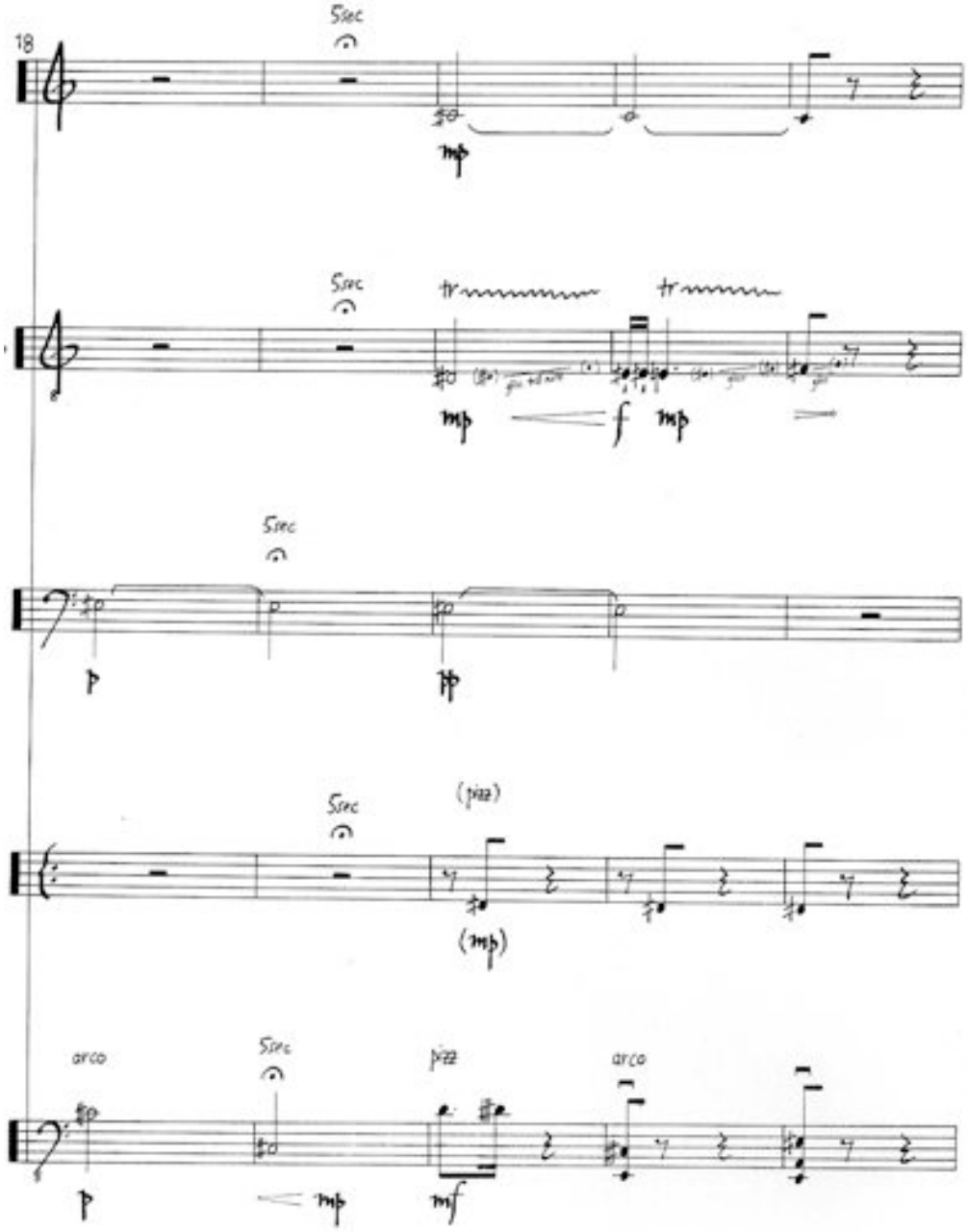
Figure 26. c. *Thousands of Bundled Straw*, Movement IV, bb. 18–22.

The ensemble continues to 'read' the map, finally reaching the vertical lines in the last part of the map, rendered with a *fermata* on the score. The final shapes make use of trilling and *pizzicati*, with the low brown lines in the bottom right of the image played as double-stopped down bows on the contrabass (bars 21–2). In this way, the Kokubunji map provides a literal link between the image and the music, and consequently provides a common vocabulary between the composer and visual artists. The artists are able to meet at this site located in ancient Japan.

> It is entirely appropriate that the starting-point for such a multi-dimensional reading of the world as latent sound and images should lie in Japan, for in the Japanese language the way of writing is both a sound and an image simultaneously. Each sign is both the drawing of a word or syllable and the sound of it, so that comprehending involves understanding both what you see and what you hear, the mind constantly switching between meanings which lie alternately in the way the sign looks and in the way it sounds. This switching of perceptual modes between looking and listening, and the kind of fusion that comes of grasping both what you hear and what you see together was an integral part of my experience of *Ricefields*.[41]

Ricefields is an investigation into bridges between different modes of reading and hearing, and *Thousands of Bundled Straw* incorporates the musical component of that investigation.

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Over 54 minutes, *Thousands of Bundled Straw* draws together nearly ten years of influences and interests ranging from packaging to literature. Structured by a sequence of interlocking frames, the song cycle pivots around a conceptual vanishing point which occurs towards the Golden Section of the work.

As a substantial body of work unfolding over a considerable duration, *Thousands of Bundled Straw* is an autobiographical inventory of compositional approaches and external source material. Many insights have been gained through the course of repeatedly returning to this material over many years, and episodically hearing performances of the work, movement by movement. In some ways, the process has exorcised a certain preoccupation with highly intricate and complex forms. At the same time it has distilled ideas about notation, collaboration and aural texture, best exemplified in the lingering, melismatic chords of Movement VII. While not an exhaustive inventory, this song cycle has become a container for a particular compositional persona, and a springboard for new compositional personae who take graphically different approaches to notation, and reach beyond just music to create work collaboratively.

[41] Hodkinson, p. 2

'The *Intelligence Cycle* is the process by which information is acquired, converted into intelligence, and made available to policymakers. Information is raw data from any source, data that may be fragmentary, contradictory, unreliable, ambiguous, deceptive, or wrong. Intelligence is information that has been collected, integrated, evaluated, analyzed, and interpreted. Finished intelligence is the final product of the *Intelligence Cycle* ready to be delivered to the policymaker.'[42]

Chapter 2
Skin Quartet: Mapping the World

Skin Quartet is a composition for traditional string quartet (two violins, viola and violoncello), accompanied by a digital film by Australian visual artist Louisa Bufardeci. The work was commissioned in 2003 by Robyn Archer, then artistic director of the Melbourne International Arts Festival, and was first performed by Japanese violinist Yasutaka Hemmi, with Australian musicians Stefanie Lindner (violin), Jason Bunn (viola) and Caerwen Martin (violoncello).[43]

The venue for the first performance—the Anna Schwartz Gallery in Melbourne's city centre—had been decided from the outset, and provided initial inspiration for *Skin Quartet*. The gallery is extremely austere, with stark white walls and a polished concrete floor. The sterile, almost clinical nature of the space gave rise to

[42] https://www.cia.gov/cia/publications/factbook/docs/history.html [accessed: 14 February 2007]
[43] Louisa Bufardeci & David Young, *Skin Quartet*, for string quartet and digital film, first performed at the Anna Schwartz Gallery, Flinders Lane, Melbourne, 13 October 2003, DVD & CD recording, Melbourne: Aphids, 2003

aspects of the work that suggest a scientific experiment, rather like placing the subject matter—statistics and skin colour—under a microscope.

Skin Quartet requires the musicians to read their parts from laptop computer screens. The score employs a combination of conventional music notation, graphic time-space notation, both black-and-white and colour images, as well as script-like instructions and animated moving image. The musicians are arranged between the audience and a projection surface (the gallery wall in the first performance), with their backs turned towards the audience (see Figure 1). In this way, the viewer/listener is able to experience the main projection of the digital film, while also being able to glimpse or oversee the musical score on the musicians' computer screens (see Figure 2).

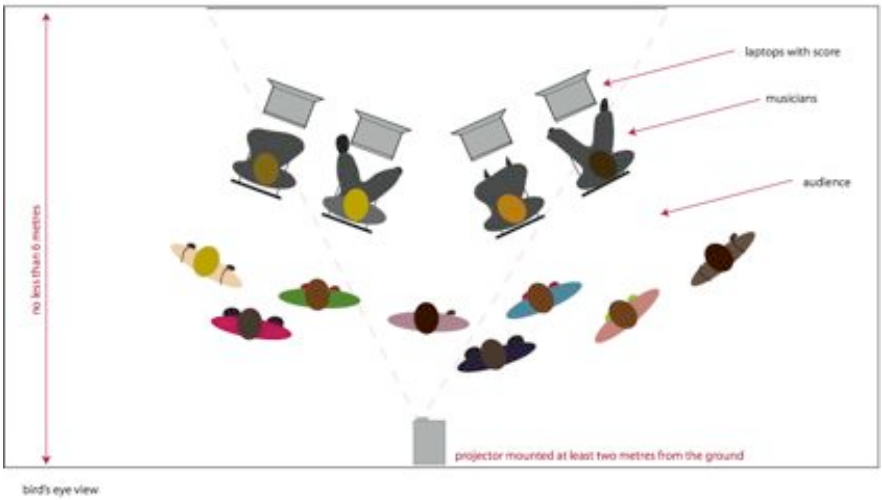

Figure 1. *Skin Quartet*, floor plan for performance.

Figure 2. *Skin Quartet*, installation/performance view, photo by Rosemary Joy.

The computer-based score is presented as a slide show, with the pages changing automatically according to predetermined durations. Therefore there are no page-turns required. The musicians need only to coordinate the start of the slide show amongst themselves and in time with the beginning of the digital film. For the most part, the score and the digital film complement each other. However in two movements (Movements 2 and 3: *Australia/Oceania* and *North America*), the musicians read from the projection, with the digital film providing the musical indications.

In addition to the standard string instruments, *Skin Quartet* requires the musicians to manipulate metal bowls containing water and ice cubes as percussion instruments. Movement 6, *Asia*, is mostly performed on half- and quarter-sized string instruments, dramatically altering both the resulting sound and the physical relationship between performer and instrument.

With the additional pieces of equipment and instruments required, the performers become both visual and aural interference between the audience and the projection. Instead of creating a purely screen-based, cinematic experience, *Skin Quartet* intentionally foregrounds the live component of the work. Far from merely providing a soundtrack, the presence of the musicians, their instruments and scores are an integral part of the performance of the work.

Cross-artform Collaboration

The concept and structure for the work were devised by the composer and visual artist collaboratively, creating the compositional score and the digital film respectively. While these two elements of the work draw from the artists' particular technical skills and approaches, there is an ongoing dialogue between the score and film.

Bufardeci's work prior to embarking on the collaboration is preoccupied with the representation of information and knowledge, often drawing on statistics, tables and systems.

> Bufardeci's installations reflect an ongoing concern with the scientific claims of various disciplines or fields of knowledge. *ColourPhonics* (2001), for example, referred to books on linguistic theory, transposing the International Phonetic Alphabet into tidy colour charts. Government rhetoric has been another preoccupation. *Cold Storage* (2001) extrapolated from [Australia's] Department of Immigration reports on asylum-seekers. From these, Bufardeci designed and built a maze of empty storage boxes in the Anna Schwartz Gallery.[44]

Taking skin colour as a starting point for *Skin Quartet*, Bufardeci began an investigation of the way in which ethnicities are enumerated by *The World Factbook*, a compendium of statistics gathered and organised by the United States' Central Intelligence Agency, or CIA.

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[44] Cynthia Troup, 'Surveying *Skin Quartet*', ed. by Juliana Engberg, *Melbourne International Arts Festival Visual Arts Program*, 2003, p. 86

The CIA's attempt to encapsulate the globe into neat rows of numbers formed the foundation of *Skin Quartet*'s conceptual framework. These rows of numbers, available online and updated annually, informed the macro- and micro-structure of both music and digital film. Although composer and visual artist work in different artforms, their media share a fundamental parameter: duration. Therefore, the durations of the work and its seven movements were agreed in the first phase of the development of the work.

The durations of the seven movements correspond to the respective land masses of the seven continents, as defined by the *Factbook*. With this framework in place, the artists' roles could be clearly defined: musical score created by composer; digital film created by visual artist. With this clear division of roles and areas of responsibility, the artists were then able to exchange and share material. The result is a constant interplay between the digital film and the musical score. In Movement 1, *Africa*, the black-and-white music notation is derived from British Colonial atlases and maps (see Figure 3). These same forms are fleetingly superimposed on the digital film's close-up images of different skin types, as in Movement 1, page 004 of the score, and at 01:17 of the digital film.

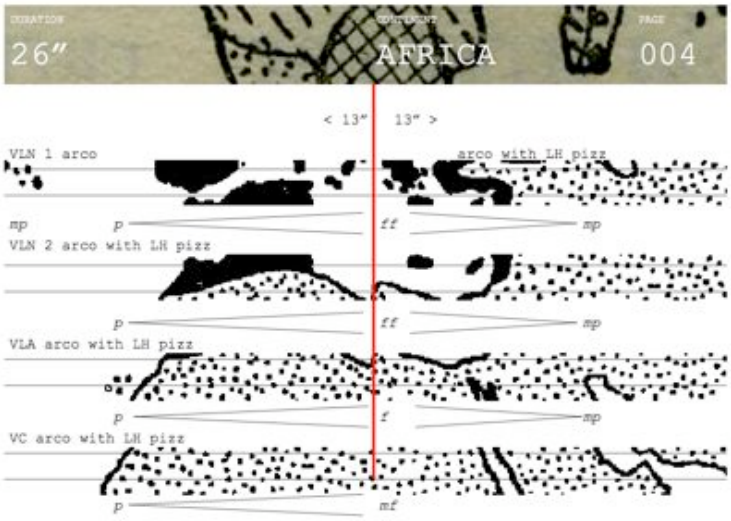

Figure 3. *Skin Quartet*, musical score, Movement 1, *Africa*, p. 004.

These clearly defined and quantifiable points of intersection between the score and the digital film provided strong pillars to hold the work together during its creation. Collaborations across artforms are frequently undertaken, but often beset with challenges. Such obstacles may include basic misunderstandings of vocabulary, notions of authorship, production and presentation. By putting in place a number of shared parameters, the inevitable dislocations that arise through an artistic collaboration could be identified early, and then allowed to enhance the work rather than hamper the process.

The collaborative aspects of *Skin Quartet* went further than the two initiating artists. The development and presentation of the work required the cooperation and input of the musicians, as well as a graphic designer, digital animator and projection technician. These other artists took different roles in terms of

chronology: some became involved earlier in the creative process than others. However, their input became critically significant in the respective phases of creation, as well as assisting in solving technical issues which occasionally arose.

Statistics

The CIA *World Factbook* dates from the early 1960s and was created to provide information to the United States government. The *Factbook* became accessible to the public as an annual printed edition in 1975 and went online in 1997.[45] This audacious project underlines a particular world view: '…the order of the *Factbook* is ultimately vertical, determined by the notion of a world political order in which the US is not simply dominant, but ideally 'on top'.'[46]

This attempt to capture information about the entire world, and quantify, sort and evaluate it, is reflected in *Skin Quartet*. The impossibility of rendering such disparate and incompatible figures across so many varied terrains seems to be forgotten in the *Factbook*. Although the movements of the film and composition are titled after vast continents, they can never even begin to represent such complex multiplicity. This disparity only highlights the unreliable nature of statistics, however carefully they are gathered, sorted and stored.

As mentioned earlier, the movements of *Skin Quartet* have durations that correspond to their respective land masses on the globe, according to the *Factbook*. In the digital film, each continent is divided into countries by red vertical lines proportional to their respective populations. Within each country, the ethnic groups that comprise the population are listed, proportional to the percentage that they make up. These categories of ethnicities, however, are not consistently applied by the *Factbook*. Each country has a vernacular approach to dividing its population, whether it be into 'white, black, African-American', or 'Korean and indigenous', or 'Anglo-Saxon, Asian, other'. The different ethnic categories within the *Factbook* are almost endless. This is one of the inconsistencies that scratches the smooth veneer that the *Factbook* presents to the world it is trying to quantify.

Throughout the digital film, large numbers pass across the screen from left to right at varied speeds, according to the respective size of the country's population with which they are associated. These numbers are the median age of each country to the first decimal point, and provide an *ostinato* to the changing micro-landscapes of skin.

Screen-based Notations

The seven movements take different approaches to music notation, ranging from traditional notation with notes on staves (Movement 7, *Europe*) to scripted instructions in text only (Movement 5, *Antarctica*) to the digital film itself (Movements 3 and 4, *Australia/Oceania* and *North America*).

The computer-based score comprises a series of images and as the tempo and sequences of the music are regulated by the computer program the musicians must resolve if they will follow the computer slavishly, for example, when the

[45] https://www.cia.gov/cia/publications/factbook/docs/history.html [accessed: 14 February 2007].
[46] Troup, 'Surveying *Skin Quartet*', p. 86

computer turns the page before the members of the ensemble have quite finished playing that page's notation. They could also resist the computer's tempo by completing the phrase, and attempting to make up the time overleaf. This latitude between score and tempo is a feature of any musical performance that reads from a score—it is usual for a musician to turn the page ahead of time, always looking ahead and anticipating what is required.

The slippage between what the computer demands, and what the musicians provide, is an calculated element of uncertainty in *Skin Quartet*. Just as the *Factbook* cannot pin down all the global statistics, similarly what might at first appear to be a seamlessly mechanised process gradually unravels as it interfaces with the demands of performance.

Black-and-White; Time-and-Space

The notation for Movement 1, *Africa*, is derived from maps and 1940s atlases imbued with British colonial history. The notation is in black-and-white, laid out in a simple time-space relationship: duration is mapped along the horizontal axis in seconds indicated along the top of the page. Dynamics (*p*, *mf*, *f*, etc.) are prescribed using conventional indications, underneath each stave. Bowing and *pizzicati* indications are also conventionally notated and placed above the staves. Red, vertical bar lines provide points of orientation for any subdivisions. Pairings of stave-like lines, one for each of the four stringed instruments, provided the reference points for pitch. The bottom line corresponds to the bottom of a conventional musical stave in each instrument (for example, the bottom line in the violin parts indicates the E above middle C); the top line is for the top line of the musical stave (such as in the violoncello where the top line is the A below middle C). Each contour, dot or cluster is to be played as precisely as possible, at the time indicated horizontally, at the pitch indicated vertically (see Figure 4).

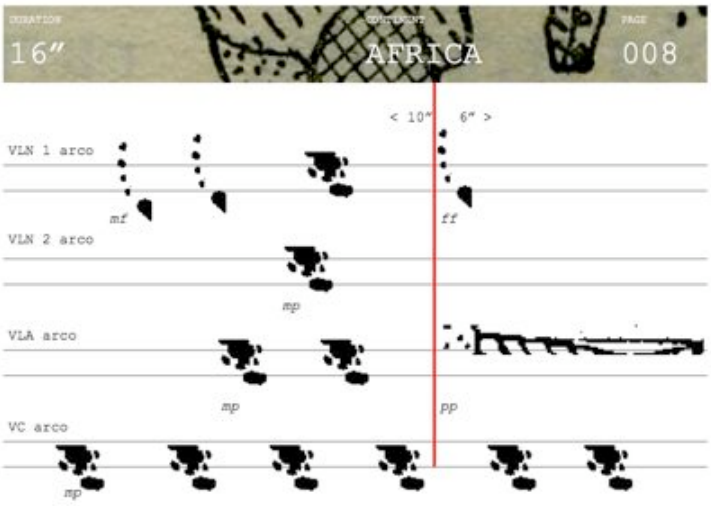

Figure 4. *Skin Quartet*, musical score, Movement 1, *Africa*, p. 008.

Repeated gestures are to played in a similar way each time they appear, and are to be consistent across the quartet—a cluster in the violoncello that later appears in

the viola part is to sound recognisable as a repetition. All of the ensemble are presented with the full score to allow them to maintain these cross-references, in terms of gesture and timing. Where a line or shape covers a cluster of pitches (such as in repeated shape on page 8 of Movement 1 that starts in the violoncello), the musician is asked to render as much of the shape as possible, within the time allowed. This creates options, such as double-stopping or *glissandi*, that leave space for interpretation. However, in performance, this space for differentiation is very limited and fleeting. The notation appears very open and immediate, but in its rendering becomes extremely precise, whilst maintaining a spontaneity that is palpable in performance.

Coloured Bowing and Many Voices

South America, the second movement, continues the use of maps and atlases, extracting cartographic details of the continent, in full colour (see Figure 5). As well as conforming to duration across the horizontal axis, there is an additional parameter of bowing positions. Different shades along the colour spectrum require corresponding bowing position, from the bridge to the fingerboard (*sul ponticello* to *sul tasto*). Pitch is freed of the stave–lines: the bottom of each instrument's panel of notation indicates the instrument's lowest possible note; and conversely the top of the panel indicates the highest possible pitch. Thus each instruments' entire *tessitura* spans the frame.

The cartographic details are riddled with lines (rivers, waterways and borders) and dots (cities and towns) which the musicians must attempt to follow. Simultaneously, the musicians are asked to vocalise the text in the panels: the names of cities and towns, rivers and islands, speaking aloud as much of the text as is visible and that can be rendered within the durational and technical limitations.

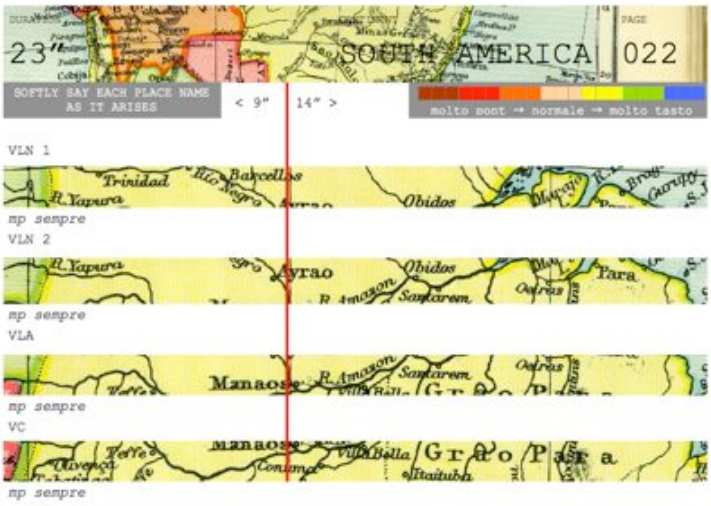

Figure 5. *Skin Quartet*, musical score, Movement 2, *South America*, p. 022.

This movement is therefore saturated with multiple indications. The musicians' focus must constantly shift from dynamics, to text, to bowing colours, to duration.

South America brims with babbling voices and entwining sinews of *glissandi* across rivers and *pizzicati*-punctuated towns. Indeed there is an overload of information, both for the performers and the listener, as though the myriad of peoples and languages and topographical features are struggling to burst out of their neat statistical boxes.

Digital Film and Score Converge

For the first twelve minutes of *Skin Quartet*, the audience watches a large projection of Bufardeci's digital film. The string quartet sit in front of and just under this projection, with their backs to the audience, reading their parts from laptop computers (as in Figure 2). The audience can therefore glimpse the musical score over the shoulders of the musicians, and notice that the digital film and the musical score have some correlations, but are essentially quite different. This relationship changes when Movement 2 fades to black, and Movement 3 begins. In this movement, *Australia/Oceania*, the same moving image appears on the projection and the laptop computer screens. The digital film and musical score have converged.

The digital film is transformed into a score by means of a set of instructions to each musician. The violoncello plays only percussive Bartók *pizzicati* in time with each red vertical line reaching the far lefthand side of the frame. The viola focuses on the large numerals that move across the centre of the frame, transposing each number into a pitch, with zero (0) equalling A natural, one (1) equalling A sharp, two (2) equalling B natural, and so on. The decimal point is played as a lefthand *pizzicato*. The second violin starts with an open A, pulsing in time with the large text, 'Australia' at the top of the frame. This becomes a natural harmonic one octave above open A when the text reaches 'Oceania'. Only the first violin has a much freer and open range of options. Taking the frame of the projection from top to bottom as the full pitch range of the violin, textures, shapes and contours are played as they appear. There is an improvisatory aspect to this part, within the clearly defined parameters of rhythm and pitch.

In Movement 4, these rules continue, with the second violin playing the open A natural harmonic *molto sul ponticello*, such that it becomes almost entirely breath for the text, 'North', and then reverting back to open A for 'America'. In this movement, the first violin continues to follow the entire image, tracking the shifts in texture and contour. The image then begins to move, with the violin following its rises and falls, rather like a spirit level, or a buoy at sea. The previous chaos of *South America* has been dispersed and elongated into calm.

Skin Deep

Antarctica has a zero population according to the *CIA World Factbook*, and hence the digital film has no country divisions nor lists of ethnicities. To mark the absence of people, the musicians are instructed to put their instruments down, and take up metal bowls of water with ice in them. The notation is now a series of written instructions, rather like the script for a play, or a recipe (see Figure 6). With a sequence of taps, shakes and breaths, the bowls are employed as subtle percussion, accompanied in the digital film by smoky, blue images that could

easily be mistaken for underwater footage of Antarctica itself, but are in fact derived from human x-rays.

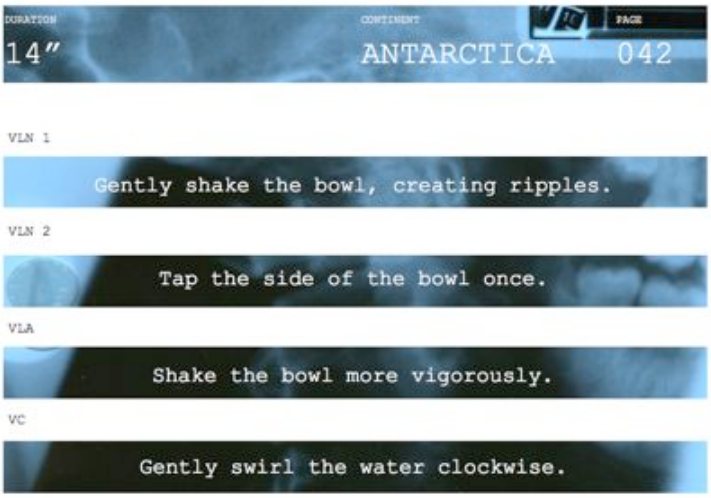

Figure 6. *Skin Quartet*, musical score, Movement 5, *Antarctica*, p. 042.

Movement 5 is somewhat of a statistical anomaly: an unpopulated land mass in a work dealing with skin colour. The string quartet is transformed into a sound installation, creating a pool of stillness at the Golden Section of the composition.

Photographic Notation

In earlier movements, the string quartet traverses a variety of approaches to music notation. In the penultimate movement, the notation consists of photographic images, laid out in horizontal strips assigned to the four instruments. As in previous movements, duration and dynamics are indicated in conventional notation, and the *tessiture* of the instruments span the vertical axis of their respective strips of image. The sound world of this movement, *Asia*, is almost entirely textural as the musicians interpret a series of hairs and wrinkles and freckles—the images are drawn from the micro-landscapes of skin that appear in the digital film. Like the first violin's more improvisatory flourishes in Movement 3 and 4, the textural and *piano* qualities of this movement allow a slightly greater freedom for interpretation, again within clearly defined boundaries.

As well as following the sweeps of hairs, played as rushing *glissandi*, this movement has another colour legend, similar to *South America*. However in this case the bowing position from bridge to fingerboard is determined by skin colour: very dark to pink (see Figure 7). The blue x-rays from *Antarctica* make another appearance towards the end of this movement, but only in the score, with a *molto tasto* bowing indication.

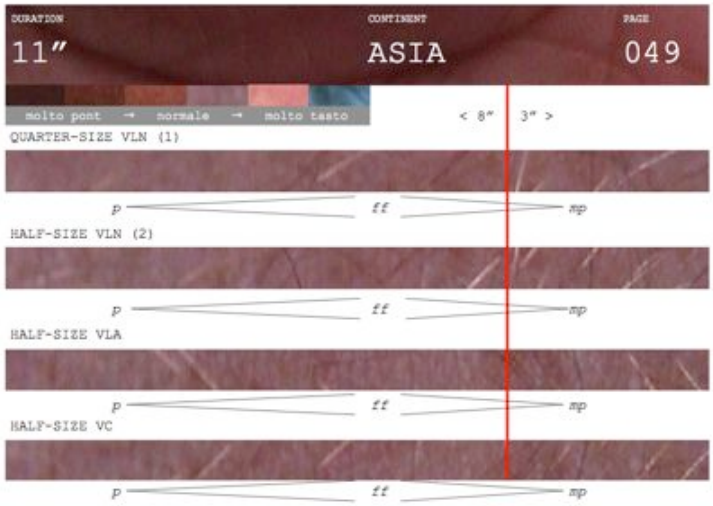

Figure 7. *Skin Quartet*, musical score, Movement 6, *Asia*, p. 049.

At the end of *Antarctica*, the final instruction to the musicians is to pick up half- and quarter-sized instruments. Through *Asia*, the ensemble perform on these instruments. The tiny fingerboards enable unusual dexterity, especially in *glissandi* and double-stopping. The sonic effect is a thinner, more focussed sound: the aural equivalent of a camera zooming in. The shift in scale also radically alters the musicians' relationship to their instruments, drawing attention to their physical presence in the space, and their interactions with the instruments.

Quantised Notes

The final *Europe* movement is in conventional notation on musical five-line staves, with quavers and sharps and rests (see Figure 8). The score still appears on computer screen, with automated page turns, requiring the performers to keep exactly in time so as not to disrupt the implicit 2/4 meter. Each of the seven pages of *Europe* corresponds to a page from another continent/movement. The material in the preceding forms of notation are here transcribed into conventional notation. The first page of *Europe*, page 086, is a direct transcription of page 011 from *Africa*. The second violin begins very softly with a series of rising double stops that begin sliding into a descending *glissando*, joined by the first violin, viola and violoncello (see Figure 8).

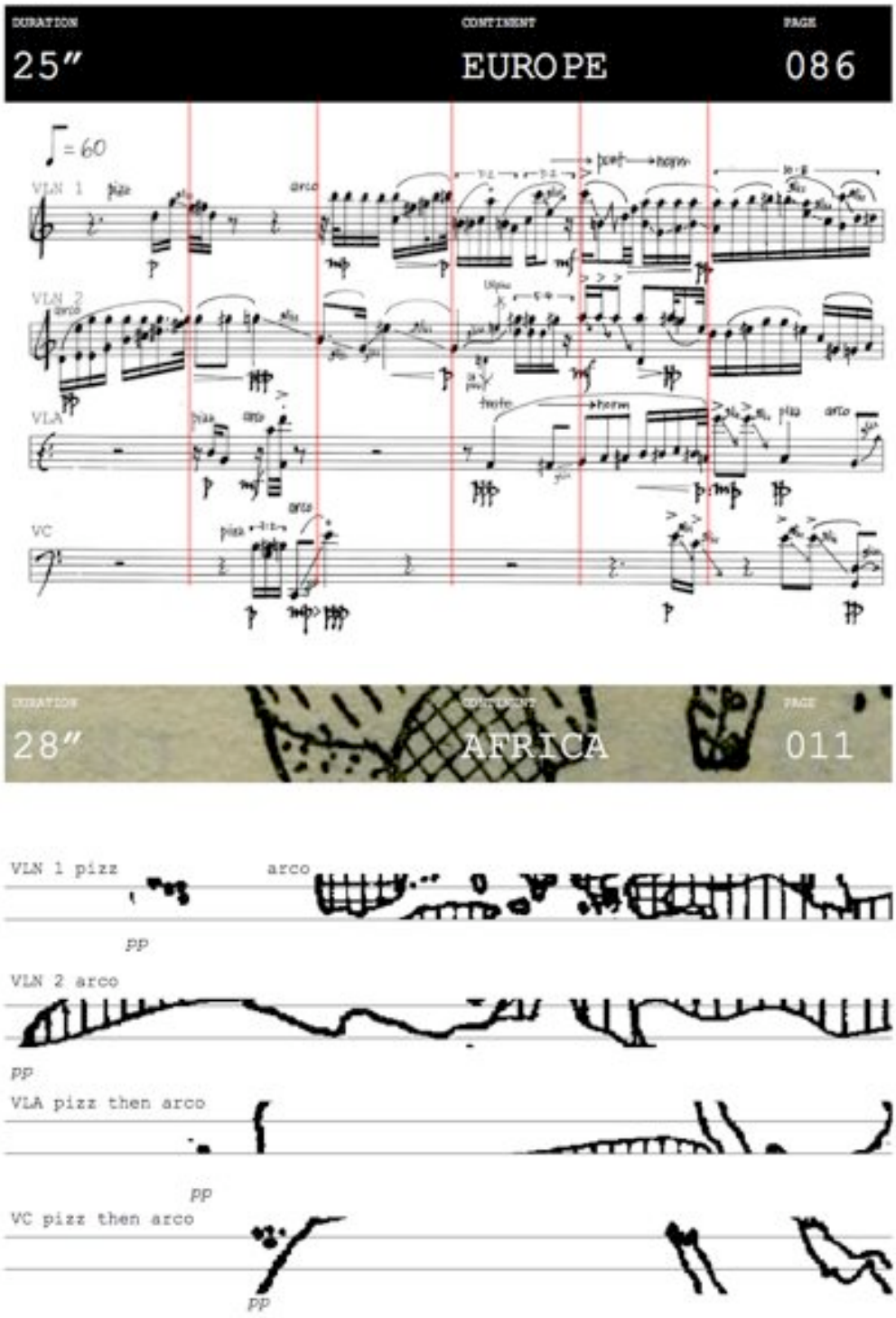

Figure 8. *Skin Quartet*, musical score, Movement 7, *Europe*, p. 086 and Movement 1, *Africa*, p. 011.

The broad outlines of *South America* appear in *Europe* at page 089 (see Figure 9), with much of the detail, such as vocalisations and complex *glissandi*, radically

reduced and simplified. The shifts between bowing positions on the bridge and fingerboard are indicated by arrows and words, rather than gradations of colour.

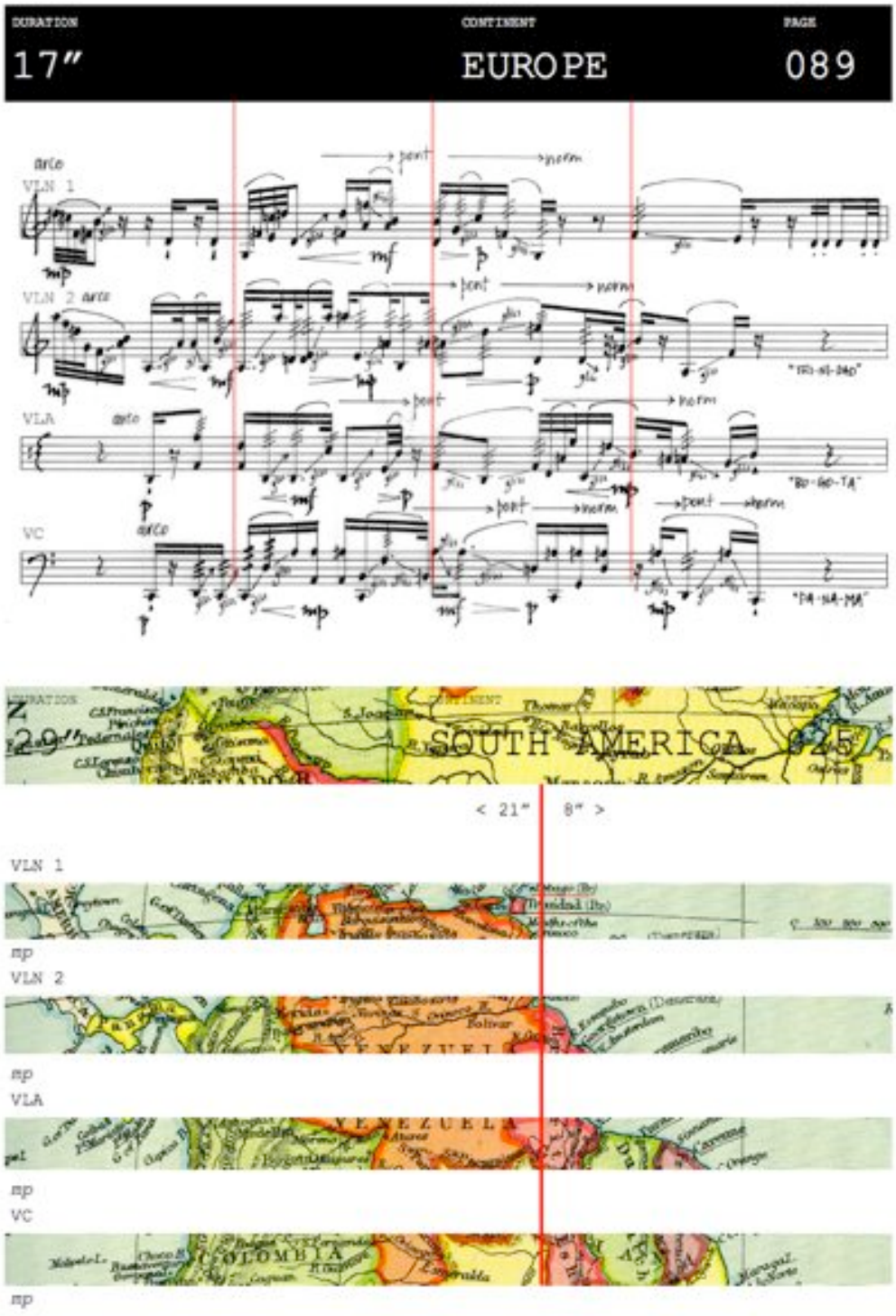

Figure 9. *Skin Quartet*, musical score, Movement 7, *Europe*, p. 089 and Movement 2, *South America*, p. 025.

The process of rendering the fluidity and spontaneity of the graphic or photographic pages adds a certain stilted quality to *Europe*, as though the music has been quantised and become pixelated. The most fluid and therefore recognisable quotation comes on the very last page of *Skin Quartet*, a static and breath-like chord that evokes the x-ray notations in the final pages of *Asia*. Movement 7 brings together fragments from throughout the piece, and transforms them into notes. This gathering of material is mirrored in the digital film for this movement which features a montage of animated skin image panels.

Performance Context, Recording and Score Slippage

Skin Quartet has many of the hallmarks of the traditional string quartet, despite its use of technology. The technical challenges associated with synchronising score and digital film operate outside of the basic relationships between notation and musician, indication and sound. The subtle slippages allowed for in the score, such as the automation of page turns and the improvisatory nature of some aspects of the piece, add grain and nuance to the generally sterile and antiseptic surface of the work.

There are technical anomalies such as the rate at which the four laptop computers process the images, and the exact position of images in the frame, which need to be resolved in order to perform and document the work. Some of these anomalies are noticeable on the DVD version of *Skin Quartet* which was created immediately after the first performance in 2003. Authored by Marcia Jane in collaboration with the artist and composer, the DVD version struggles to remain exact to the required durations and positioning of images, while the audio recording occasionally slips out of time due to the changing circumstances of recording and rendering, and the various formats required to capture the work.

Since 2003, *Skin Quartet* has been presented in a range of contexts, from the original gallery presentation at Anna Schwartz Gallery in Melbourne, to a theatrical presentation on stage at the Sydney Opera House's Studio, to an installation version in a disused swimming pool in Brussels, to presentation in an atrium in Portland, Oregon (USA) resembling a basketball court. Each of these contexts involved different spatial relationships between the string quartet and the projection, and between the performance and the audience. Although in each case the audience had quite different experiences, at times intimate, passive or interactive, the overall effect remained surprisingly constant due to the structural and statistically precise connections between the work's components. Furthermore, despite the apparent space for differing interpretations, performances of the music sounded almost exactly the same each time.

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Skin Quartet transverses a world of musical notations, laying them out in pedagogical fashion. Bufardeci's digital film converts data into timelines and micro-landscapes of different coloured skin, while the string quartet reads music that is at times in juxtaposing dialogue with the digital film, and at other times one and the same. More than a visual accompaniment, more than a soundtrack, the digital film is also the musical score, and the musical score is also the digital film.

Skin Quartet is above all the residue of an intense collaboration across artforms. The dual-faceted work—musical score and digital film—represents a mode of composition that draws on the musical techniques developed in *Thousands of Bundled Straw* which have evolved in this case into both an aural and visual experience. This form of collaboration is therefore an extension of the technical and artistic possibilities available to the composer.

…Ogni anno si scoprono, si mettono in luce e si documentano superfici istoriate
che hanno riposato per milleni sotto la coltre di erba e di muschio:
quest'area è una miniera senza fine.[47]

Chapter 3
Val Camonica Pieces: Scratching the Surface

The *Val Camonica Pieces* are a series of seven chamber works comprising two solos, a duo, trio, quartet, octet and a work for fifteen instruments. The pieces take their inspiration, and in some cases their notation, from the remarkable and multifarious array of rock carvings to be found in the Camonica Valley in northern Italy. More specifically, the compositions are a response to the work of archaeologist Emmanuel Anati who has dedicated his life to the study of rock carvings throughout the world (including Australia). Anati is the recognised authority and expert on the *incisioni rupestri camuni* [Camunian rock carvings], having published extensively on the subject. He still lives in the valley in the township of Capo di Ponte.

[47] 'Every year there are discovered, brought to light and documented surfaces with historical scenes that have lain for millennia under a blanket of grass and moss: this area is a mine without end.' Emmanuel Anati, *I Segni della Storia*, Rome: Di Renzo, 1997, p. 73

Ancient Rock Carvings

The Val Camonica rock carvings date from the Bronze Age, and unlike many artefacts from antiquity, were never sealed in a cave or completely buried by earth or water. Instead the rock carvings are in the open air, scratched into the many expansive rock faces up and down the valley, on to plinth-like boulders and standing stones. The valley was originally formed by glaciers which left the many smooth rock faces in their wake. Glacial activity also accounts for the extreme hardness of the rock which has preserved the carvings so well. Open to the air, the rock carvings have been gradually added to over thousands of years and therefore incorporate a myriad of different styles, from very simple graphics through to Etruscan and even Latin graffiti.

Set in the alpine region just north of Brescia, Val Camonica is now a popular tourist destination for locals to go alpine walking and rock climbing. A common school excursion from nearby Milan is to take a bus up to Capo di Ponte to visit the *Parco Nazionale delle Incisioni Rupestri*, situated in the tiny village of Naquane. Under the protection of the Superintendent of Archaeology of Lombardy, this park is a fenced off area of several acres that contains one of the valley's densest concentrations of florid rock carvings, ranging from now famous individual images through to entire hunting and battle scenes. These include carvings that seem to represent figures on horseback with head dresses and detailed weapons; dozens of different species of animal and bird; spears and hammer-like shapes; dwellings or looms; and a vast repertoire of completely abstract patterns of dots, circles and lines.[48]

Within the *Parco Nazionale*, the numerous groupings of rock carvings are sign-posted with interpretative notes and graphic transcriptions. As an example of scale, the fifty-metre-long surface called *La Grande Roccia di Naquane* includes 876 figures created over five identifiable phases of carving.[49] Belying their age, the carvings are still clear and sharply outlined. However because of the monochromatic qualities of the rock faces and the shallow nature of many of the carvings, the best time to visit the park is either early morning or at twilight when the sunlight is at the sharpest angle. The shadowing that results from the angled sunlight reveals the striking images and complex scenes in relief to the smooth rock surfaces. The carvings are under constant surveillance by uniformed security guards who patrol the park. However perhaps because the rock itself is so hard and robust, it is permitted to touch the carvings, and indeed school excursions routinely involve groups of students with tracing paper and charcoal taking rubbings of the carvings.

In the introductory chapter to the proceedings of the *Colloque international sur la cartographie archéologique et historique*[50] there is reproduced a transcription of a rock carving called the *Mappa di Bedolina* (see Figure 1), described as the first extant example of a map. Indeed the reproduced image strongly resembles an aerial view of a cluster of fields, with dots in careful rows possibly representing stocks of

[48] For background to the park and comprehensive maps of the rock carvings within its boundaries, see Vincenzo Fusco & Alberto Galbati, *Naquane: Parco Nazionale delle Incisioni Rupestri: Guida Itineraria*, Bergamo: Libreria del Parco, 1990

[49] Emmanuel Anati, 'La Grande Roccia di Naquane', *Archives de L'Institut de Paleontologie Humaine*, Vol. 31, 1961, pp. 1–189

[50] Raymond Chevallier, *Colloque International sur la Cartographie Archéologique et Historique, Paris, 1970*, Tours: Piganiol, 1972, p. i

animals or some other sort of property. There are winding lines that could be pathways, roads or waterways that transverse and encircle the 'fields' with clusters of animals and birds as well as houses and even a ladder. Preliminary research very quickly led to Anati's work, and the series began from this initial contact with Val Camonica through books and illustrations.

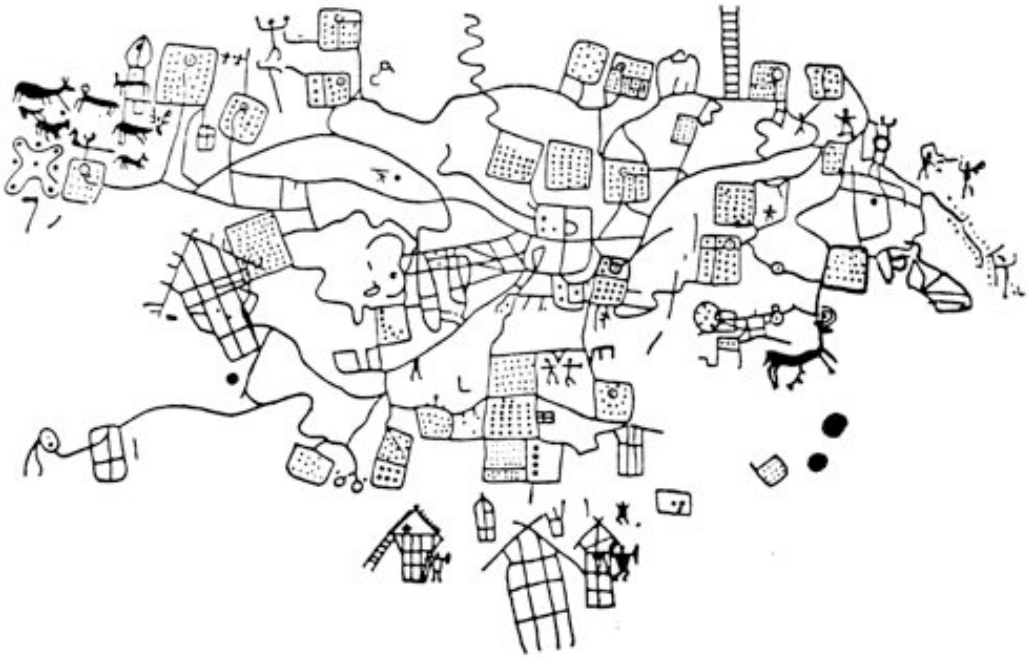

Figure 1. The *Mappa di Bedolina*.[51]

Three Styles

In order of composition, the first piece in the *Val Camonica* series is three short movements for violoncello and guitar, commissioned by the Florence-based musicians Francesco Dillon and Gisbert Watty, and first performed by Rosanne Hunt and Geoffrey Morris in Melbourne, 1999.[52] The title of these movements, *Stile I, II & III*, does not refer so much to three styles of rock carving themselves, but rather to Anati's attempt to document, articulate and organise the chaos of varying designs into three distinct styles. Anati's three styles are broadly defined by chronology and degree of simplicity or complexity. His First Style is made up of simple, repeated symbols: lines, dots and shapes whose significance is not clear. The Second Style involves much more representational imagery, with simple figures or people and animals becoming more incorporated. The Third Style, and the most recent according to Anati, is the most complex and sophisticated. Anati goes into great and precise detail about this Third Style, and is not afraid to impose his own often florid interpretations on to the rock carvings.

[51] Chevallier, p. i

[52] The first performance took place on 16 July 1999 at the North Melbourne Town Hall as part of the Aphids production *Radio 1*. Also on the program was the first live performance of Samuel Beckett's radio play, *Radio 1*, with music by Richard Rijnvos.

> Of particular interest is also a scene describing a procession of religious characters, that reveal with singular clarity the costumes and social organisation of the prehistoric Camunians. In fact in this scene, there appear two groups of people, one directly against the other. From one part the men circle a particularly distinguished personage, the only one of the group that rides a horse, that has weapons in his hands, and is wearing the ritual head dress of a priest. This is probably the head of the clan or tribe, and this signifies his religious and civil powers. In the centre of the second group there are two personages with priests' head dresses. They are the only ones in scene that do not carry weapons and they are also the ones whose arms are not raised to the sky.
>
> This scene therefore reveals various colourful aspects of great interest: the head of the tribe was entitled to two powers, and the priests were dispensed with weapons to carry. An ulterior particular of interest is revealed by the fact that other personages were grouped around the head of the tribe, while others are gathered around the priests.[53]

Anati confidently attaches his interpretative narratives to each new rock carving scene. This imaginative quality in Anati's 'research' is juxtaposed dramatically with his rigorous and exhaustive lists, maps, inventories and lexicons relating to the Val Camonica rock carvings. Anati goes into excruciating detail about the distribution and interrelationships of the thousands of sites that he has explored, documented and commented on in this relatively small geographical region.

Anati's research and the rock carvings themselves have striking contrasts of whimsical imagination and archaeological precision and rigour. The *Val Camonica Pieces* bring these contrasting qualities together by combining technically precise and intricate musical figures with lyrical and whimsical gestures. The notation employed through the series similarly navigates a path between extreme precision and interpretive freedom, most obviously evident in the use of conventional versus graphic notations.

Stile I, II & III use only conventional notation. The three movements can be performed in any order. Indeed the *Pieces* in the whole series can also be performed in any combination, in any order, just as one might encounter individual rock carvings or entire sweeping scenes as one wanders through the *Parco Nazionale*. Each *Piece* has a different mood and approach, a different style that affects tempo, dynamic, density of *icti* and rhythmic flow. The compositions can be understood as musical or compositional transcriptions of the rock carvings; transpositions of the repeated and various shapes and contours from the rock on to musical staves.

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[53] *'Di particolare interesse è anche una scena descrivente una processione di carattere religioso, che rivela con singolare chiarezza I costumi e l'organizzazione sociale dei Camuni preistorici. Infatti in questa scena, appaiono due gruppi di persone, l'uno diretto verso l'altro. Da una parte gli uomini circondano un personaggio di particolare distinzione, l'unico del gruppo che sia a cavallo, che abbia in mano le armi del guerriero, ed in testa l'acconciatura rituale del sacerdote. Questo è probabilmente il capo del clan o delle tribù, che racchiudera in sé I poeri religiosi e quelli civili. Al centro del secondo gruppo vi sono due personaggi coll'acconciatura del sacredote. Sono I soli della scena che non portion armi ed anche I soli le cui braccia non siano levate al cielo.*

Questa scena ci rivela quindi vari parti colari di grande interesse: il fatto che il capo tribù era titolare dei due poteri, ed il fatto che I sacredoti erano dispensati dal portare le armi. Un ulteriore particolare di interesse ci è rivelato dal fatto che alcuni personaggi erano raggruppati attorno al capo tribù, mentre altri si riunivano attorno di sacerdoti.' Anati, 'La Grande Roccia di Naquane', p. 110

Stile I takes its style and material from carvings on the Cemmo masses. These huge boulders, situated just outside the township of Capo di Ponte, are covered in repetitions of animals and tools, just like an inventory or list of property. Within these repeated symbols, there are occasional variations or mutilations where the rock has cracked or fragmented. *Stile I* begins with the 'cello playing a regular semi-quaver rhythm, which is periodically interrupted and elaborated on by the guitar. The guitar plays with a subtle quarter-tone *scordatura* on the A-string and B-string, raising them to A-quarter-sharp and B-quarter-sharp respectively. This slight adjustment allows the guitarist to quickly and precisely find quarter-tone pitches as required, and also creates a slight discordance with the 'cello. This discordance helps to increase tension, as in bar 21 where the 'cello reaches a climatic D-natural to D-sharp, followed immediately by an alternating E-natural and E-quarter-tone-sharp on the guitar. The slight dissonance arising from the *scordatura* is further increased by distortion (by increasing bowing pressure and bowing near the bridge) as well as a 'high-pitched vocalised pop!' from the guitarist. Compared to *Stile II & III*, the movement has a flowing simplicity akin to the Oglio River's slow winding down the valley into Lake Iseo, periodically traversed by bridges.

Stile II has a completely different mood, with a spaciousness enhanced by the slower quaver-equals-fifty metronome marking, and a polyphonic, interlocking harmonic structure. With aggressive Bartók *pizzicati* interjections and constantly shifting bowing positions, this movement evokes the process of actually carving the rock's surface. The vocabulary of gestures and techniques evolves from *Stile I*, as this movement attempts to render in music the more complex rock carvings that Anati categorises as the Second Style. This can be seen in the last bar of page 3, with the 'cello incorporating lefthand *pizzicati* with sudden changes in dynamics and bowing. The double-stopped phrase in the middle of the bar is accompanied by the guitar, almost silently bowing an open string laterally with the fingernail, and then adding a loud *sforzati glissando*. All of this activity and detail results in a large range of colours and timbres, densely packed into the small spaces between rests and long-decaying notes.

Figure 2. Detail from *Roccia 1* in the *Parco Nazionale delle Incisioni Rupestri*.[54]

[54] Fusco & Galbati, p. 20
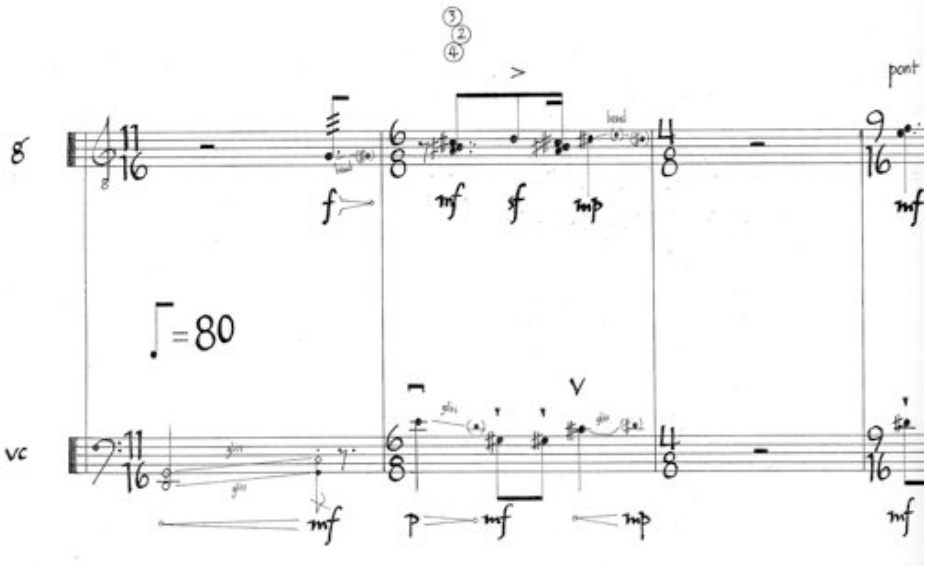
Figure 3. *Stile III* for guitar and violoncello, bb. 1–3.

The third and final movement in the *Stile* pieces is a direct transcription from *Roccia 1* in the *Parco Nazionale*.[55] It is this scene that Anati describes with such abandon and detail above. In this movement, the shapes and symbols in the tribal scene are rendered by the guitar and 'cello with the same combination of freedom and precision that Anati brings to his work. The first symbol that is translated into music is a spear being held up by a hunter on the far left (see the transcription of the rock carving in Figure 2 and *Stile III*, bars 1–3 in Figure 3). Starting *dal niente* on an artificial harmonic, the 'cello plays the upward-inclining spear as an ascending *glissando*. When the *glissando*-spear reaches the hand that is holding it, the guitar enters with a fleeting tremolo, immediately taken up by the 'cello which plays a down-bow *glissando* that follows the hunter's arm. The hunter's feet become the G-sharp *spiccati*; his head is the accented D-natural quaver in bar 2; and the phrase ends with the guitar playing the outline of the spear-tip while the 'cello bends a note in the shape of the shield or boomerang-like object in the hunter's left hand. The empty space between this hunter and the rest of the group becomes the four-quaver rest of bar 3.

This musical rendering continues throughout *Stile III*, and a consistent vocabulary of gestures is developed: the feet of hunters, priests and even animals are played by the 'cello as *spiccati*; the feathery headdresses worn by some of the people become *tremolo* gestures on either instrument; dots are played *pizzicato*; the size of the lines and symbols correspondingly determine dynamics; positioning vertically creates pitch (higher on the rock means higher in pitch); and rhythm or timing works along the horizontal axis, from left to right. The movements of *Stile I, II & III* each have their own character and mood that relate to the qualities of Anati's three styles of rock carvings. Furthermore, a vocabulary of symbols and gestures has been developed in microcosm—a vocabulary that went on to develop as the *Val Camonica Pieces* were composed.

[55] Fusco & Galbati, p. 20

A Lexicon of Symbols

Continuing chronologically, the next *Val Camonica Piece* is *Lexicon* for three violoncelli, composed for an installation/performance involving music and sculptural visual art.[56] Taking the more rigorous tendencies of Anati as a starting point, this trio is exactly as it is titled: a lexicon or list of symbols transcribed on to musical staves. Anati uses seven categories to organise the hundreds of examples of rock carvings that are found in the valley: figures, animals, structures, tools, symbols, maps and shrouds. Although he is recognised as the leading expert in the field, Anati is not the only archaeologist at work in this region. Ausilio Priuli also lives in Capo di Ponte, on the other side of the valley to Anati, and Priuli represents quite a different philosophical position to Anati's imaginatively interpretative approach.

In the introduction to *Valcamonica: Valley of Prehistory*, with the title 'Premise', Priuli hints at this difference of position, which can broadly be described as 'empirical', as opposed to Anati's more 'academic' or 'intellectual' mode:

> This description of the valley, of its settlements, rocks and sites containing rock carvings, certainly does not claim to be exhaustive. Indeed, it proposes to stimulate laymen to acquire greater knowledge of these carvings, to discover their meaning, to behold them personally…The information presented in this brief but also incisive synthesis wishes to leave to the intelligence of the readers certain conclusions, instead of conditioning their minds to the author's own interpretations.[57]

To underline this further Priuli has a note at the end of the monograph: 'For further information, booking of guided tours of the *Valcamonica* incisions, consultation, revelation of new discoveries and scientific advice, please contact: *Museo Didattico d'Arte e Vita Preistorica* [Didactic Museum of Prehistoric Art and Life].'[58] Priuli also has seven categories in his lexicon of rock carvings, which he calls a 'syncronic [sic] table of higher alpine concentrations of rupestrian art': symbols, zoomorphous figures, anthropomorphous figures, weapons/tools, structures, proto-statuary/megalithic statuary and secondary manifestations.

The composition *Lexicon* is in seven sections corresponding to Anati's archaeological lexicon. As with the *Stile* movements, the three 'celli gradually develop a consistent vocabulary of articulations that correspond to the various shapes and contours. The *spiccato* 'feet' of the different types of figures are introduced in 'cello III, bar 3 of section 1.2; the *tremolo* headdresses (as in 'cello I, section 1.2, bar 8) and other decorations such as ricochets ('celli II & III, section 1.3, bar 12) and microtonal *vibrati* (final bar of section 1.4) progressively adorn the steady list of musical phrases, constantly effecting subtle shifts and elaborations.

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[56] *Lexicon* was first performed by Clare Brassil, Fiona Furphy and Jane Tallon as part of *Travelling*, presented by Aphids at La Mama Theatre, a collaboration between composer David Young and visual artists Sarah Pirrie, Kath Armour and Rosemary Joy, Melbourne, 1997. For the installation/performance, the visual artists incorporated imagery inspired by the Val Camonica rock carvings into their work.

[57] Ausilio Priuli, *Valcamonica: Valley of Prehistory*, Brescia: Priuli, 2002, p. 3 [Note that in the many published accounts of the Camonica Valley, in both English and Italian, *Val Camonica* as two words and *Valcamonica* as one word are used interchangeably. The separated Val Camonica form is used here, except where it appears in titles and quotations.]

[58] Priuli, p. 80

The resulting musical lexicon is comprised of these ever-changing combinations of harmonies, timbres, performance techniques, gestures and rhythmic motifs, evoking the vast and bewildering range of carved designs, patterns and scenes. To firmly order and anchor this array, a number of parameters remain constant throughout the piece, as relentless as Anati's tenacious academic investigations. The tempo is always a regular crotchet-equals-sixty-three, although time signatures change to reflect the size and number of entries in each of Anati's categories. However the most obvious and unremitting feature occurs at the end of every section when all three musicians are required to simultaneously turn the page. These twenty page turns are an intentional and clearly audible interjection into the music, marking the boundaries of the different categories, and evoking Anati's persistence in leaving no stone unturned.

Sarcophagus

A sarcophagus is a stony monument to the dead; similarly the Camunian rock carvings are monuments to a series of now dead civilisations. The etymology of sarcophagus is more vivid, coming from the Latin and formerly Greek words for flesh-consuming.[59] No sign of living flesh is to be found on the cold rocky surfaces of Val Camonica however. The coercive power of the rock art has completely consumed the bodies and transformed them into signifiers of Priuli's lost reality and Anati's possible pasts.

The artistry of so many of the rock carvings defies their prehistorical dating. The character and movement in the figures and animals is remarkable for its sophistication given its early origins. One of the most famous carvings in the *Parco Nazionale* is the *stregone che corre* [running witch-doctor], etched with legs outstretched and arms reaching out, thus creating a sense of dynamic movement in this otherwise static image.[60] At times, the carving's position on the rock seems to add to the scene's meaning, such as the carvings of a funeral or initiation rite (see Figure 4, a funeral or initiation scene from *Roccia 32* in the *Parco Nazionale delle Incisioni Rupestri*). A row of standing figures are scratched into the face of the rock that stands vertically, with the single figure lying flat, in the horizontal dip of the rockflow. The result is a kind of diorama, a pre-Nativity *presepio* whose meaning and significance is now lost.

[59] sarcophagus [Latin formerly Greek, 'flesh-consuming' (*sarx* flesh, *-phagos* eating)], OED.
[60] Discussed in more detail in Emmanuel Anati, *I Camuni - Alle Radici della Civiltà Europa*, Milan: Jaca, 1979, p. 129–30; see also Fusco & Galbati, p. 42

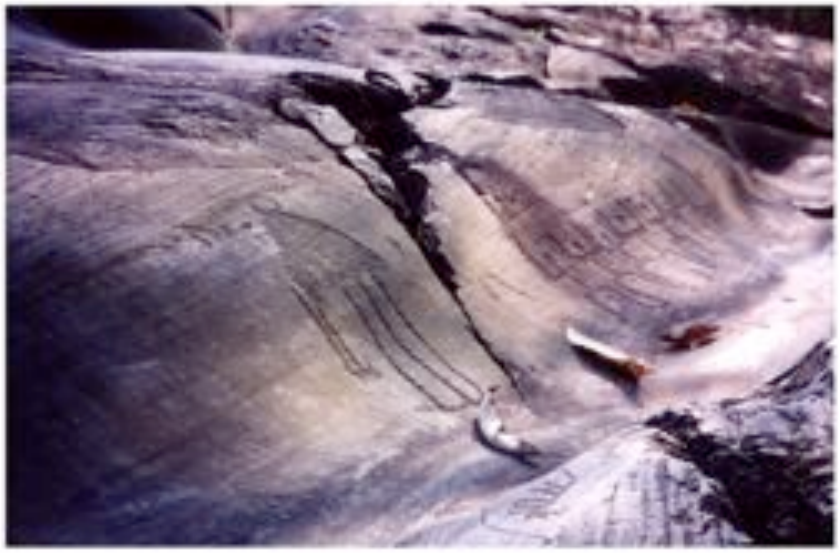

Figure 4. Funeral or initiation scene,
Roccia 32, *Parco Nazionale delle Incisioni Rupestri*, photo by the author.

Sarcophagus for string octet (and *Inventario* to be discussed later) was originally composed for an ensemble of advanced music students.[61] The students workshopped and rehearsed the piece with members of the Elision Contemporary Music Ensemble, and then performed it in a concert of new works. With this rehearsal and performance context in mind, both works are somewhat pedagogical in their structure and composition, encouraging the performers to enter a very specific musical world.

The *Mappa di Bedolina* is situated on the hillside high above Capo di Ponte, in the rear garden of a local resident. This domestic setting is an unlikely location for such a significant and well-known example of ancient cartography, but it affords an impressive view into the valley. Having swept away the inevitable leaves and debris that accumulate on the rockface, one can stand over the map and see the direct correlations between topography and rock carving, river and winding line, slopes and contours, livestock and rows of dots. From this vantage point, it is easy to sympathise with Anati's imaginative interpolations when examining the rock art. The *Mappa* evokes a vivid rural scene that is only reinforced and made more plausible by the cartographic and geographic correlations.

Sarcophagus pairs two each of violins, violas, violoncelli and contrabassi, echoing the pairing of map and landscape. The instrumental pairings follow and weave around each other from bar 1: the 'cello entries overlap and imitate more and less exactly, like superimposing the weathered map over the now altered course of the river or path of the road (see Figures 5 and 6). This restless coupling continues throughout the piece, perhaps most strikingly from bar 47 to 53 in which the basses groan, stretch and merge, almost lining up and then slipping away.

[61] *Sarcophagus* and *Inventario* were commissioned and first performed by the Australian Youth Orchestra (formerly Youth Music Australia) for the *New Music Now* Program with the Elision Contemporary Music Ensemble in-residence, Brisbane, October 1999, conductor Denis Cohen.
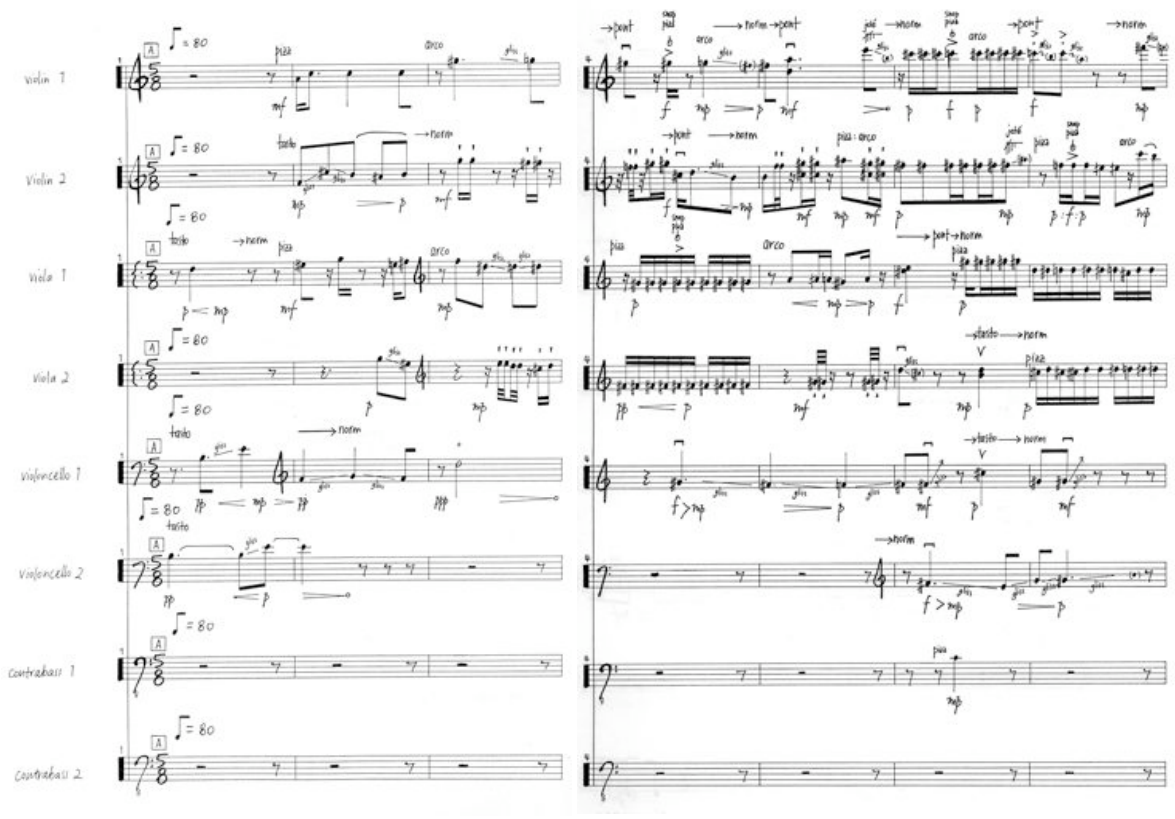
Figure 5. *Sarcophagus* for string octet, bb. 1–7.

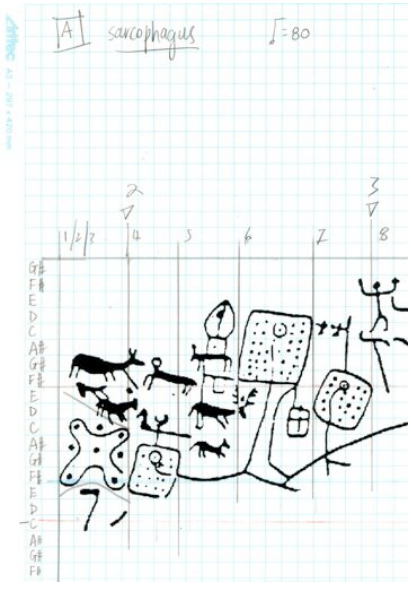

Figure 6. Sketch for *Sarcophagus* for string octet, bb. 1–7.

The five sections of the work each draw on different layers of the *Mappa*. Section A (bars 1–24) is an exposition of all the elements, tracing the entire shape of the map,

and filling in as many details as possible: dots and animals and intricately lined pathways. Having established the terrain, Section B (bars 25–46) focuses on the dots, or 'cups' that fill the *Mappa*'s fields. The cups become individual *pizzicati* in the musical score, with the occasional interruptive attack *molto ponticello sforzando* in the second violin (bars 36–8). Next is an *arco* articulation of only the lines of the *Mappa* (Section C, bars 47–75) beginning with the tunnelling basses, and eventually reaching the surface swelling to a unison C-sharp (bars 72–5). Section D (bars 89–107) is suddenly muted, with practice mutes on all the instruments removing all resonance. The almost doubling of tempo (from quaver-equals-70 to quaver-equals-120) emphasises the frantic yet hardly audible etching away, like ice-skates on concrete. The final Section E (bars 89–107) is left only with fragments, glacial shards that are reminiscent of previously heard textures and arrangements. These sliding blocks of bowing and plucking surge with slow *glissandi* and eventually are subsumed all together.

The *Val Camonica Pieces*' vocabulary of *spiccati* for feet and *pizzicati* for dots is retained, but with a more muted range of decorations and extended techniques. *Sarcophagus* is an elegy giving voice to the dead.[62] It is intentionally monochromatic and dirge-like; its superficial features only pointing to some deeper and less reachable substance below. The piece traces an exterior place, scratching the surface and encasing that which lies within.

An Inventory of Notation

Inventario [from the Italian for 'inventory'] is a companion piece to *Sarcophagus*, taking the same string octet (two each of violin, viola, violoncello and contrabass) and enhancing it with flute, oboe, B-flat and bass clarinets, horn, tenor trombone and two percussionists. *Inventario* is literally a list or inventory of musical objects, all of which are derived from Anati's rock carving transcriptions and aspects of his research into the largest and most florid rock carving scene in the valley: *La Grande Roccia di Naquane*. The piece is for fifteen instruments and was commissioned (with *Sarcophagus*) by the Australian Youth Orchestra (formerly Youth Music Australia).

As explained in the performance notes, *Inventario* is divided into three sections according to notation. The opening section up to bar 78 employs conventional notes on staves, with conventional rhythm and pitch notation. After a brief prelude (bars 1–3), this section establishes a time signature which remains constant for the remainder of the piece. This repetition of quaver beats (2, 5, 5, 3, 8) encourages the performer to perceive each line as a phrase with subdivisions, hence the partial bar lines; the repeated metric pattern creates a foundation on to which different notations are gradually added.

Throughout this first section the rhythms are all metered and intricately interlocking. Each line, or metered set (2, 5, 5, 3, 8), is like a line in Anati's archaeological inventory of rock carving symbols. Bars 29 to 33, for example, contain an exposition of five musical 'objects' or gestures (see Figure 7):

[62] The dedication is to my grandmother, Marie Burnett (née Swift), who was a constant encouragement and inspiration for my music.
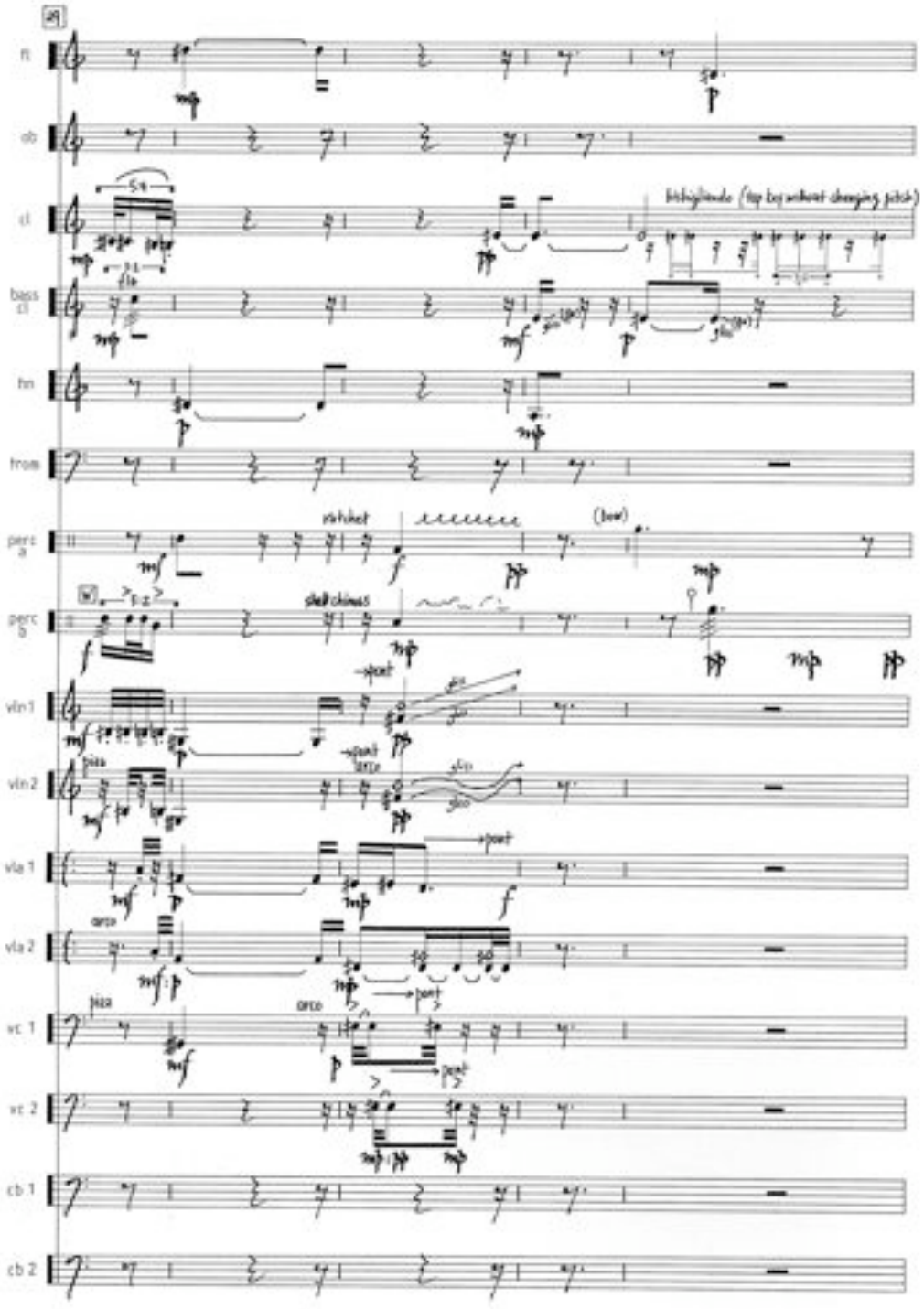
Figure 7. *Inventario* for 15 instruments, bb. 29–33.

Interlocking rhythmic gesture: in bar 29, the first 'object' is articulated by the upper strings, percussion B and clarinets in interlocking demi-semi-quavers against a triplet and quintuplet.

This is followed in bar 30 by a static chord of microtones clustered around G (G natural, G quarter-sharp, G-sharp and G-three-quarter-sharp) in the strings, against a D-sharp in the flute and horn.

Bar 31 then introduces a hint of graphic notation in the sweeping *glissandi* lines in the violins, and the gestural indications for the ratchet in percussion A and the shell chimes in percussion B.

Bar 32 contains a short chord in the clarinets and horn, with a subtle upwards *glissando* in the bass clarinet.

This chord continues into bar 33, introducing timbral colouring of the D-quarter-sharp with *bisbigliando* (rhythmically changing the fingering without changing the pitch), bowed cymbal and resonant ceramic bell.

The piece is a list, or growing inventory of musical objects such as these, all of which recur and develop. As each object is added to the list, a sound world of pitch-relationships (such as quarter-tone clusters), rhythmic motifs, and extended techniques is established. The performer is introduced to a series of musical approaches that are spelt out exactly and precisely in the score. The language that is learnt in the first seventy-eight bars of *Inventario* can then be employed in the succeeding sections.

Having established a musical language, the second section requires some interpretative decisions from the performers: 'From bar 79 to 98 a graphic notation is used. This is generally in the form of a notehead indicating a starting pitch, followed by an irregular line which indicates the duration of the note and the movement of the pitch (*glissando*). Where a line or block covers more than one pitch, this may be interpreted as a multiphonic, double-stop, trill, *glissando*, run, or as a single pitch with distorted tone.'[63] This seems to allow many options, however the graphic notation is deceptively exacting. The relative position of noteheads and lines leaves surprisingly little room for choice. The apparent freedom of this notation is further refined by the dynamic indications (*p*, *mf*, *f*, etc.), as well as the influence of the conductor (although not absolutely essential, *Inventario* is much more easily performed with a conductor).

From bar 99 there begins the literal transcription of rock carvings on to staves (see Figure 7). An array of figures, animals, tools, abstract symbols and structures are scattered across the score, much as they appear on the rockfaces in the Camonica valley. While these rock carvings may seem out of place on a page of music, in the context of the notated music of section one, and the graphics in the second section, they acquire precision and logic. A palette of timbres and techniques has been offered to each musician. A vocabulary of symbols and styles has been gradually accrued. Instead of just seeing small figures and leaping deer, the musicians can read the rock carvings as precise rhythmic and pitched gestures. Assisted by dynamic markings and the occasional accent or *pizzicato* indication, the performers are fully equipped to render this third and final section with both exactitude and spontaneity.

[63] From the Performance Notes to *Inventario*.
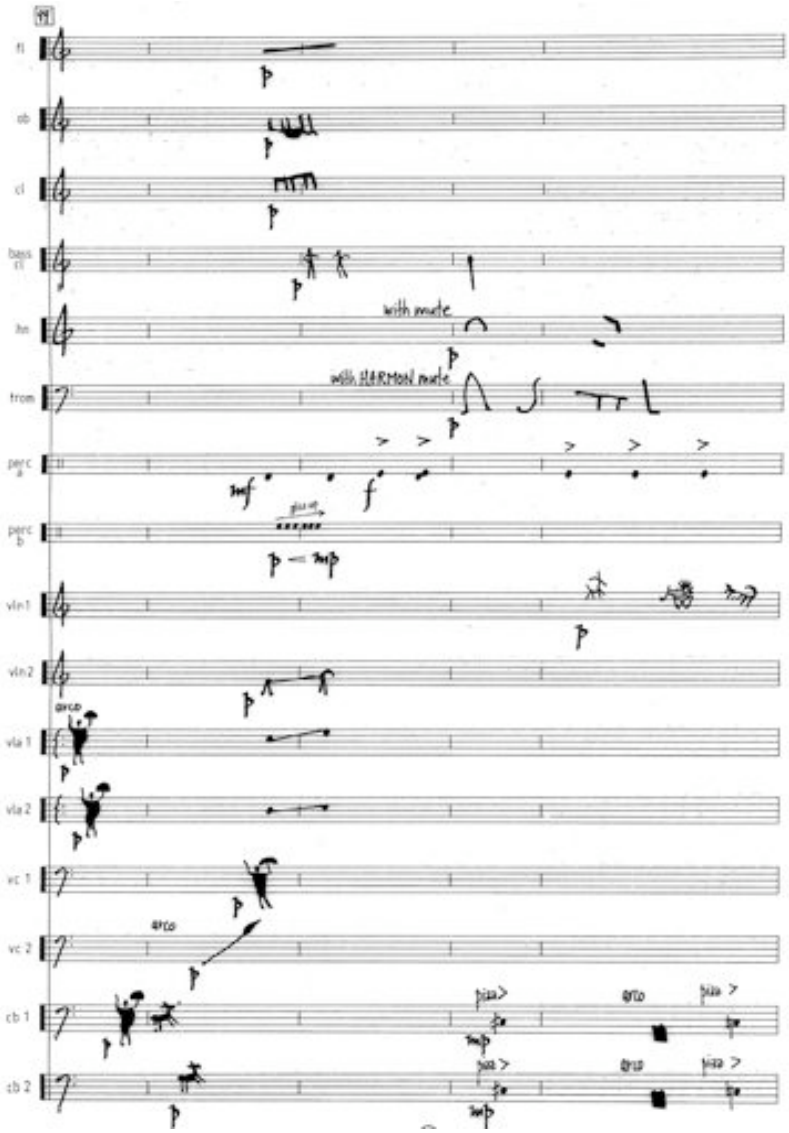
Figure 7. *Inventario* for 15 instruments, bb. 99–103.

The final line of *Lexicon* introduces a small window of freedom in which the 'shrouds' are performed by the three celli as free, unmetered *glissandi* (section 7.1). In the same way, but much more expansively, *Inventario* progressively pins down a new and explicit lexicon of notation while retaining a certain freedom and reactivity on the part of the musicians.

> Still open to the alpine air, exuberantly confounding historical time, the Val Camonica imagery resists definitive interpretation, and Young's compositions celebrate this resilience and variety. Eventually the writing all but relinquishes conventional notation; musical language is eroded to curious marks and signs that depend on the imagination and discretion of the performer for translation. Over the final 60 bars of *Inventario*, the 'originary calligraphy' of the rock art is literally transcribed onto instrumental parts. With pictographs layered over the score, the neatness and formality of the composer's own schema are undone, as emblems,

creatures and figures break through and boldly enliven the strata of the stave.[64]

Animals

Inventario presents a brief pedagogy of notation; *Animali* for solo violin describes the same in microcosm. Unlike Anati's attempt to encompass a universal inventory for the Val Camonica rock carvings, the seven pages of *Animali* take only one category—the animals—and examines it in detail.

From the opening bar, the violinist is presented with an array of notated musical indications—*staccato*, *tenuto*, accent, ricochet, *glissando*, artificial harmonic, *col legno*, lefthand pizzicato—all to be played *molto pianissimo*. It would only have been possible to imagine this intricacy with the cooperation of a musician not daunted by such demands. Yasutaka Hemmi commissioned the work in 2002 and went on to record it the following year. As suggested in the notes to the resulting compact disc, Hemmi has a taste for music that employs found objects and demands polyphony from the soloist.[65] He also has a keen interest in music that requires new techniques and solutions to musical challenges, bringing a combination of sharp intellect and vigorous physicality to his performances. *Animali* presented several such challenges, and the final score was only arrived at through close collaboration and experimentation between composer and performer.

Aspects of the work that required close consultation with the performer included the many alternations between *arco* and *pizzicato*, which at times reach a furious pace, as in bars 4 and 5. These collaborative explorations sought to define the limits of technical possibility, investing the work with a vivacity that is palpable in Hemmi's recording. The energy and rigour demanded in this piece aim to generate a sense of the music leaping into life, just as the rock carving animals seem to be leaping on the stone. In this way, *Animali* is programmatic—the violinist takes on characteristics of the creatures that have infiltrated the score. The somewhat whimsical interpolations of graphics in between the notes distract and unnerve the reader, while preparing them for the invasion of the rock carvings in the final page. In the words of an equally virtuosic musician, clarinettist Carl Rosman: 'The entire last page indeed consists of the cave [sic] drawings superimposed on an otherwise blank musical stave—in a relatively unusual act of compositional humility, Young writes himself out of the piece.'[66]

Score as Code

The *Val Camonica Pieces* can be distributed along a continuum from conventional to graphic notation. The final two works employ exclusively graphic notation: *Roccia* [or 'rock'] in colour, and *Incisioni Rupestri* ['rock carvings'] in black and white. These studies in graphic notation seek nuances and subtleties that would be more difficult or impossible to achieve with conventional notation. The graphics also seek to resolve the challenge of creating a notation that is exacting and

[64] Cynthia Troup, '*Val Camonica Pieces: Sarcophagus* and *Inventario*', concert program note, *New Music Now*, Australian Youth Orchestra (formerly Youth Music Australia), 1999, p. 7
[65] Carl Rosman, *Yasutaka Hemmi: Violin Encounters*, CD sleeve notes, Ghent: Megadisc Classics, 2004
[66] *Ibid*.

precise, while retaining freedom and spontaneity. Simon Shaw-Miller suggests that all notation, all musical scores are a code:

> Although all scores are the result of written textual activities, achieved in the process of visualization, graphic scores are a particular case. For example, transcription is much more difficult. Although they can be reproduced through photographic means (as a painting can), they do not allow simple transfer into another format (as conventional notation can be written out in another hand)...graphic scores remind us that all scoring is a code. Such scores explicitly make visible the processes (and problems) of communication and organization; script and score are not allowed to remain an 'invisible' medium.[67]

By transposing the source of the compositions, their inspiration, directly on to the score, an additional facet to the pieces is revealed to the performer. The musicians are not only interpreting pitch and rhythm through the tablature of the notation; they are also invited to experience the whimsical and unexpected nature of the rock carvings themselves, and in doing so, they are invited a little further into the compositional process.

Roccia for clarinet, violin, piano & percussion was commissioned by the Antwerp-based ensemble Champ d'Action in 2003. The score uses a simple time-space notation, with pitch indicated vertically and duration on the horizontal plane (see Figure 8). Horizontal lines indicate exact pitches (middle C, etc.) with other pitches to be played relative to these lines (higher on the page equals higher in pitch). Similarly, duration is indicated by vertical lines, like bar lines, with durations indicated in seconds (3 seconds, 7 seconds, 5 seconds, etc.).

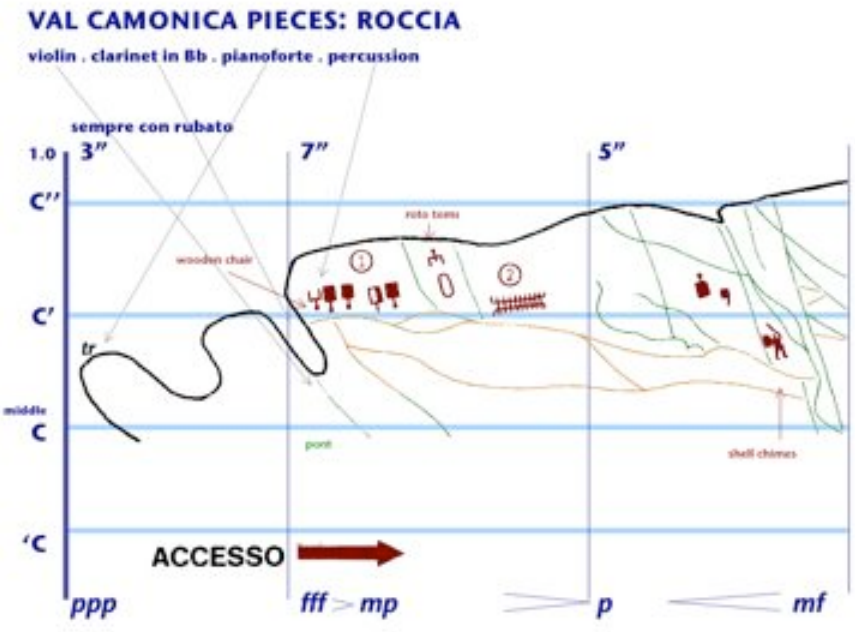

Figure 8. *Roccia* for violin, clarinet in Bb, pianoforte and percussion, bb. 1–3.

[67] Simon Shaw-Miller, *Visible Deeds of Music*, New Haven: Yale, 2002, p. 20

Each instrument reads markings in a different colour: orange for clarinet, green for violin, brown for percussion and black for pianoforte. This use of colour allows all of the ensemble to see all of the parts. This then allows them to orient themselves and perform in relation to each other, both in pitch and timing. Some parameters are indicated using conventional notation, such as dynamics, pedalling for the pianoforte, *pizzicato* and so on. Descriptive instructions on most pages provide insight into how the page is to be played—*con calma* [calmly], *con sorpresa* [with surprise], *fuori controllo* [out of control]—always with an edge of irony that acknowledges the unconventional approach to notation.

The percussion part is different to the other instruments in that it uses the horizontal plane for timing, but the vertical plane indicates instrumentation rather than pitch. At times there is an intentional ambiguity as to which instrument is to be used. This introduces an element of entropy into the notation, which urges the performers to read the notation as a precise tablature, and not as a freely interpreted series of gestures. In this way, the notation is much more akin to Pederecki's use of graphics (most notably *Threnody for the Victims of Hiroshima*[68]) where the notation has specific meanings and requirements. This is in contrast to graphic notation which is much freer and requires an open response from the performer, such as Berberian's *Stripsody*.[69] And yet *Roccia* owes a certain debt to Penderecki, Berberian, and Cage, and the many composers who tread the line between determination and chance.[70]

> All art involves choices. Even the employment of chance involves choice and preference, and as the composer Maurice Kagel has often remarked, each realization is the death of chance. And yet, total control is not achievable, for the art of reception, as well as performance, engages a world beyond the control of the artist or composer. All art, therefore, sits on a line between these two (theoretical) extremes.[71]

The first performance of *Roccia* took place in Ghent, Belgium[72]. The ensemble was unconducted and used scores printed on paper. The musicians agreed on a tempo (crotchet equals 60) in order to count the shorter bars. For the long bars of fifteen and twenty seconds, the ensemble had to listen to each other carefully in order to be able to position themselves in relation to each other. The page turns provided a further landmark to assist the ensemble in keeping together.

The second performance took place on the other side of the world, in Melbourne, with different musicians and a different performance context. Instead of reading from printed scores, the ensemble read their parts from a large data projection of the score. The projection was cued so that the page turns were timed to change automatically, which certainly kept the ensemble together and left less to chance. The audience was also able to see the score, unlike in Ghent where they could only glimpse pages of the score, enough however to see that the score used coloured graphics rather than conventional notation. Despite the benefits of the ensemble

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[68] Krzysztof Penderecki, *Threnody for the Victims of Hiroshima*, for 52 strings, Mainz: Schott, 1960
[69] Cathy Berberian, *Stripsody*, for solo voice, New York: Universal, 1966
[70] For discussion of the use of graphic notation in the twentieth century, see Simon Shaw-Miller, *Visible Deeds of Music*, New Haven: Yale, 2002
[71] Simon Shaw-Miller, *Visible Deeds of Music*, p. 194
[72] *Roccia* was premiered at the Logos Foundation, Ghent, 19 June 2003 as part of a Portrait Concert by Antwerp-based ensemble Champ d'Action.

seeing their parts in a large format and with timed page turns, this performance context using projection had several drawbacks. The audience was very distracted by the visual display, and when asked after the performance, many had hardly even heard the music. Furthermore, the experience had an inherent literalness which almost reduced the piece to a game: see the symbol, wait for the sound. The differences in these performance contexts were extremely useful in determining the best approach to rehearsal and performance of the *Val Camonica Pieces*.

Despite the different contexts, locations and performers, *Roccia* sounded the same on both occasions. The seemingly open-ended notation had proved to be extremely defined, functioning as a relatively unambiguous notation that could share with the performers the pleasure of the rock carving images themselves.

Incisioni Rupestri

The final *Val Camonica* piece is a solo of nine minutes for pianoforte called simply *Incisioni Rupestri*. It was commissioned by Michael Kieran Harvey for performance in Sao Paolo, Brazil, on 16 November 2004. *Incisioni* is literally 'cuts' or 'engravings' in Italian; *incisioni rupestri* is usually translated as 'rock carvings'. This solo is, in many ways, a distillation of the explorations into archaeology, the Camonica valley and alternative music notations that are pursued in the preceding pieces.

Like *Stile I, II & II* and *Inventario*, *Incisioni Rupestri* is in three parts, each with different musical and notational styles. As in the earlier pieces, direct transcriptions of the rock carvings are superimposed on to the pianoforte's staves. A time-space approach to duration and rhythm is employed, but more simply here, with a single durational indication at the start of each part (each line lasts for three minutes). With conventional dynamic markings, and numerous notehead-like dots, the notation appears quite familiar in places, and more ambiguous in others. As with *Inventario*, *Animali* and *Roccia*, the performer is asked to adhere strictly to the positioning of the markings, rendering them as accurately as possible in terms of timing and pitch.

This piece's soloistic nature and chromatic instrumentation clearly differentiates it in the series. There is no ensemble or conductor to hamper the rhythm or regulate tempo, engendering an inevitable *rubato* in performance. Furthermore the swirling lines that might sound as a smooth *glissandi* in strings or woodwind, here must be played as chromatic runs, albeit blurred by speed and pedalling. The intention is to give the performer slightly more latitude, as one might bring to a cadenza. This additional latitude is restricted only by the overall durational indication (3 minutes), and the 'quantising' effect of the chromatic keys (there are no microtones). Some fluctuation in pitch or timbre could be achieved by using various extended techniques (playing inside the pianoforte, dampening strings, silently depressing keys and so on), but these are left completely to the performer's discretion. From the vivid colour of the *Roccia* score, *Incisioni Rupestri* takes the notation back to plain black and white; floridly graphic but monochromatic nonetheless.

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While studying and working with the Val Camonica rock carvings and their associated archaeological research, the question inevitably arises as to why so many inscriptions are concentrated in this particular location. It was only in 2002, upon visiting Val Camonica and seeing the rock carvings in person for the first time, that an explanation presented itself.

The township of Capo di Ponte is the locale of many major rock carving formations: the *Mappa di Bedolina*, the Cemmo masses and the *Parco Nazionale d'Incisioni Rupestri* which contains *La Grande Roccia di Naquane*, *il stregone che corre* and myriad other scenes. Capo di Ponte is flanked on one side by Badile Peak; on the other by Mount Conarena. At the spring and autumn equinoxes, both mountains are subject to unusual optical phenomena, nowadays called the 'Spirit of the Mountain'. At these times, the sun rises directly behind *Pizzo Badile*; for a few minutes beforehand, the ghostlike shadow of the mountain appears in the sky (see Figure 9). [73] Then across the valley, just before sunset, a spectacular optical illusion takes place: a cleft appears at the top of *Monte Conarena* from which a shaft of light appears to shine out (see Figure 10).[74]

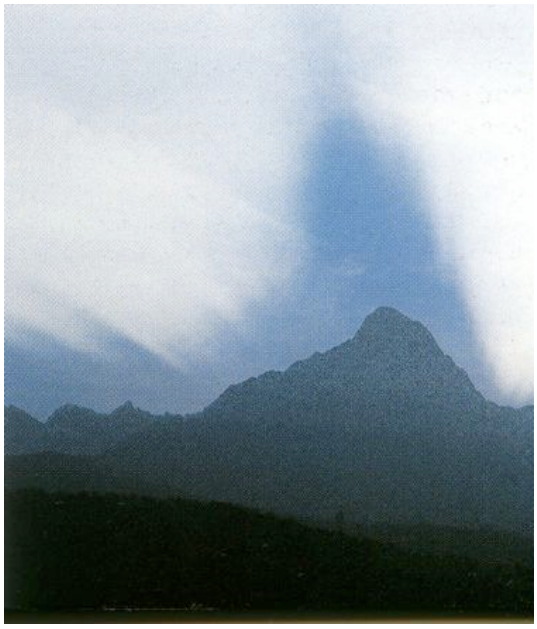

Figure 9. Some minutes before the sun rises exactly behind Badile Peak at the equinox.[75]

[73] Priuli, p. 13
[74] *Ibid*., p. 12
[75] *Ibid*., p. 13

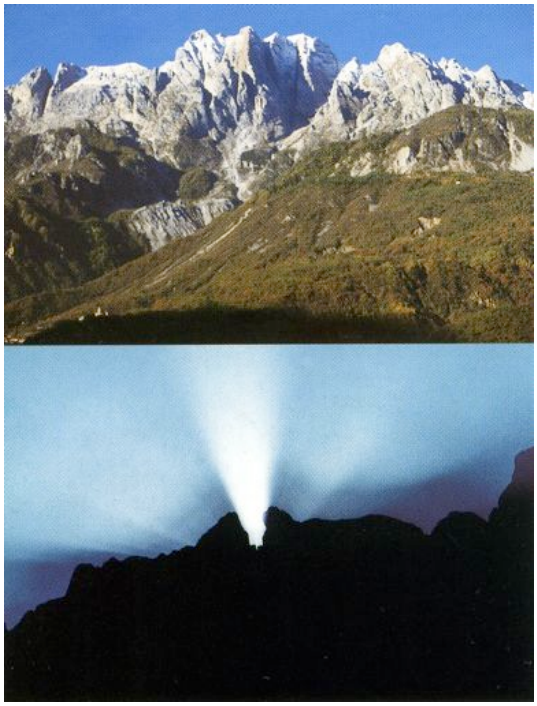

Figure 10. The sunset in a cleft of Mount Conarena at the equinox.[76]

To people inhabiting this region since the Bronze Age, these manifestations were and still are undoubtedly a cause for bewilderment and at times veneration. Despite Anati and his many disciples' attempts, we still are not sure who made these works of rock art, nor what they were intended to signify. This uncertainty and open-endedness is echoed in the *Val Camonica Pieces* through their modular structure, range of notation and translations of rock carvings into sound.

[76] *Ibid*., p. 13

Artists talk a lot about freedom. So, recalling the expression 'free as a bird,' Morton Feldman went to a park one day and spent some time watching our feathered friends. When he came back, he said, 'You know? They're not free: they're fighting over bits of food.'[77]

Conclusion

In his uncompleted lectures, *Six Memos for the Next Millennium*, Italo Calvino reflects on the constraints and sub-structures that shape his own work, as well as that of Georges Perec:

> In order to escape the arbitrary nature of existence, Perec, like his protagonist [in *Life A User's Manual*], is forced to impose rigorous rules and regulations on himself, even if these rules are in turn arbitrary. But the miracle is that his system of poetics, which might seem artificial and mechanical, produces inexhaustible freedom and wealth of invention. This is because it coincides with something that had been Perec's passion ever since his first novel (*Les Choses*, 1965): a passion for catalogues, for the enumeration of objects, each defined both in itself and by its belonging to

[77] John Cage, *Silence*, London: Calder & Boyars, 1968, p. 265

> an epoch, a style, a society; a passion extending to menus, concert programs, diet charts, bibliographies real or imaginary.[78]

Much of the allure of Calvino and Perec's writing lies in this irrepressible inventiveness born of restrictions. *Thousands of Bundled Straw* is a composition that seeks expression within a complex series of rules and formulae. Indeed all three of the works discussed here draw from compendiums, catalogues and lists, which are employed as foundations, bricks, mortar and detail in their construction.

Part of the charm and fascination of these inventories is also their futility, the impossibility of encompassing every type, interpretation and fact. Just as the CIA's *World Factbook* will always be out of date and incomplete, so too will Emmanuel Anati's lexicon of rock carvings. The interpolation of graphic and unconventional music notation in *Skin Quartet* and the *Val Camonica Pieces* is motivated not solely by an interest in exploring new forms of notation, but it also subverts the possibility of the works ever having a definitive performance. As with the *World Factbook*, there remains a gap of uncertainty, room for error or doubt.

Notation is one of the composer's only means of communication with the musician. The use of various forms of notation engages the performer in different ways, attempting to convey the composer's intention as directly as possible. Anati has devoted his life to elaborating on and trying to quantify the meaning behind the 'ancient little figures pecked into the ice-smoothed rocks of Valcamonica, in Alpine north Italy'[79]. However, the rock carvings are very articulate by themselves.

> The special merit, and the special attraction, of rock-art as the subject of archaeological enquiry is its directness. These are images from ancient worlds as ancient human minds envisioned them; these are neither stray fragments of ancient garbage nor chance stumps of perished buildings. They are all direct material expressions of human concepts, of human thought.[80]

The musical notation, whether conventional, graphic or moving, is at its most transparent and accurate when it manages to achieve this kind of directness.

The *Val Camonica Piece*, *Lexicon*, is divided into seven categories of rock carvings used by Anati: figures, animals, structures, tools, symbols, maps and shrouds. These categories are, to varying degrees, easy to recognise in the Camonica Valley carvings. What this list simultaneously suggests is that there could be other ways of categorizing the rock carvings. Each of the compositions in this folio creates not just an individual sound world, but through the use of theatrical devices, visual and literary references, multimedia and so on, they each construct one particular possible world view.

In *Les Mots et Les Choses*, Michel Foucault attributes the inspiration for his work to Jorge Louis Borges' imaginary Chinese encyclopaedia:

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[78] Italo Calvino, *Six Memos for the Next Millennium*, trans. by Peter Creagh, London: Jonathon Cape, 1992, p. 122
[79] *Ibid*., p. 3
[80] Paul S. C. Taçon & Christopher Chippindale, *The Archaeology of Rock-Art*, Cambridge: Cambridge University Press, 1998, p. 2

> …in which it is written that 'animals are divided into: (a) belonging to the Emperor, (b) embalmed, (c) tame, (d) sucking pigs, (e) sirens, (f) fabulous, (g) stray dogs, (h) included in the present classification, (i) frenzied, (j) innumerable, (k) drawn with a fine camelhair brush, (l) *et cetera*, (m) having just broken the water pitcher, (n) that from a long way off look like flies'. In the wonderment of this taxonomy, the thing we apprehend in one great leap, the thing that, by means of the fable, is demonstrated as the exotic charm of another system of thought, is the limitation of our own, the stark impossibility of thinking *that*.[81]

The worlds created within *Thousands of Bundled Straw*, *Skin Quartet* and the *Val Camonica Pieces* are unfamiliar, yet suggest an internal coherence. Under ideal conditions, the effect could be the same as that apprehension on reading Borges' taxonomy: the sensation of encountering an utterly different system of thought.

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Since completing this folio of compositions, many of the experiments, research and ideas explored in the works have been applied in new ways. The calm and transparent quality of the seventh movement of *Thousands of Bundled Straw* strongly influenced a new work for the Ives Ensemble, titled *A Leaf from the Book of Cities*, after Paul Klee. This miniature tuba concerto uses conventional music notation throughout, and maintains a simplicity that paradoxically enhances the lushness of harmony and timbre.

The screen-based animated notation in *Skin Quartet*'s *Australia/Oceania* and *North America* movements has inspired a series of new works using moving photographs. These include percussion music and electronic soundscapes for *Oribotics*, a series of installations fusing interactive robotics with origami principles by multimedia artist Matthew Gardiner. Gardiner has also designed a customised computer program which facilitates the composition of photographic scores. The program assembles the desired images, and includes a moving vertical line to indicate timing, the speed of which can be varied.

The collaborative cross-artform process involved in *Skin Quartet*, as well as *Ricefields*, continues to have a strong influence on composition for Aphids projects.[82] These projects have included collaborations with theatre-makers (*A Quarreling Pair*, Melbourne, 2003), writers and visual artists (*Scale*, Brussels, 2004), architects and instrument builders (*Schallmachine 06*, Melbourne, 2006 and *Schallmaschine 07*, Basel, 2007). The projects have demanded that the role of composer stretch to many other spheres, both artistic and logistical. This has brought with it certain restrictions, together with certain freedoms. When asked about this during a conversation about the theatre project *A Quarreling Pair* (with Margaret Cameron and Cynthia Troup, *Meanjin*, 2005), this tension was clear:

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[81] Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences*, New York: Random House, 1970, first published in French as *Les Mots et les Choses*, Paris: Gallimard, 1966, p. xv

[82] For a detailed discussion of composition for Aphids projects, see the interview with Cynthia Troup, 'David Young: Producing Uncertainty', *Contemporary Music Review*, Vol. 25, No. 4, 2006, pp. 379–392

> Composing is a strange, mixed practice, always conceptual and visual, as well as sound-oriented. Speaking more broadly, Aphids manifests in a whole range of different modes…I'd like to hold on to that way of being an artist, that attempt to hover above or around the exacting titles and job descriptions that are inevitably misleading.[83]

Composition will no doubt continue to present new boxes to squeeze in and out of, some self-imposed, others forced from the outside. The challenge is to continue seeing these boxes as a source of inspiration, as the founder of the OuLiPo group, Raymond Queneau (as quoted by Calvino) suggests: 'The classical author who wrote his tragedy observing a certain number of known rules is freer than the poet who writes down whatever comes into his head and is slave to other rules of which he knows nothing.'[84]

[83] Margaret Cameron, Cynthia Troup & David Young, 'Ready, Fire, Aim', *Meanjin*, Vol. 64, Nos. 1–2, 2005, p. 308
[84] Calvino, *Six Memos for the Next Millennium*, p. 123

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List of Works

composed between 1997 and 2007
excluding folio compositions

Chamber Music

I. A Leaf from the Book of Cities, 2006
II. Cooling in a Garden of the Torrid Zone, 2006
Clarinet, tuba, violin, viola, violoncello, percussion & pianoforte
7 min.
Commissioned by the Ives Ensemble (Amsterdam)
First performed July 2006, Stuttgart, ISCM World New Music Days

Lacrimae Rerum, 2001
Six voices
7 min.
Commissioned by The Song Company
First performed July 2001, Australian Centre for Photography, Sydney

In an Initial C, 2000
Soprano, recorder & guitar
Approx. 15 min.
Commissioned by Contemporary Music Events
First performed October 2000 by the Aphids Trio, The Public Office Carpark, Melbourne

Rent , 1997
Alto flute, oboe, clarinet, trumpet, tenor trombone, violin, viola, contrabass & percussion
10 min.
Commissioned by Elision Contemporary Music Ensemble
First performed October 1997, Brisbane Festival

Cross-artform Collaborations

Schallmachine 06, 2006
Architecture/miniature percussion collaboration with Fritz Hauser & Boa Baumann (Switzerland), Speak Percussion & Rosemary Joy
Variable duration
First presented October 2006 by Aphids, Melbourne International Arts Festival underneath Federation Square, Melbourne

Oribotics [Laboratory], 2005
Matt Gardiner's robotic origami installation for solo percussion & electronics, miniature percussion instruments by Rosemary Joy, performed by Eugene Ughetti, sound design by Jethro Woodward
Variable duration
First presented November 2006 by Aphids in association with Asialink, Sidney Myer Asia Centre, University of Melbourne

Scale: Abstracts 01 to 04 & The Uninhabitable 01 to 07, 2005
Part of a collaboration with Rosemary Joy & Cynthia Troup for miniature percussion, toy piano & guitar
30 min.
First performed July 2004 by Fedor Teunisse, Yutaka Oya & Tom Pauwels, Bains::Connective, Brussels

Oribotics, 2004
Part of Matt Gardiner's robotic origami installation for solo percussion & electronics
21 min.
First performed May 2004, by Eugene Ughetti, sound design by Peter Humble, TCB Gallery, Melbourne, Next Wave Festival

Ricefields, 1998
Installation / performance for soprano, recorders, violin/viola, percussion & electronics
Approx. 70 min.
Commissioned by Aphids in collaboration with visual artists Sarah Pirrie & Rosemary Joy
First performed September 1998 by Aphids, La Mama Theatre, Melbourne; subsequently toured to France, Japan and Australia, 1999

Solo Instrumental

Schallmaschine 07, 2007
Solo miniature percussion by Rosemary Joy
7 hours, 42 min.
First performed January 2007, Fritz Hauser's *Different Beats* Festival, Basel, Switzerland

16 Boxes, 2005
Solo percussion with assistant origamist
11 min.
First performed December, 2005 by Eugene Ughetti, Yarraville Masonic Temple, Big West Festival, Melbourne

In Search of Rare Grasshoppers, 2002
Bass recorder & electronics
8 min. 30 sec.
Commissioned by Natasha Anderson
First performed August 2002, Monash University; recorded by the ABC for CD release

Music Theatre

Overheard at Inveresk, 2001
Miniature opera for soprano, percussion, choir, boy soprano, bicycles & electronics
Approx. 50 min.
Commissioned by Ten Days on the Island
First performed by Maria Lurighi, Tom Kelly & Michael Hewes, March 2001, Inveresk Railyards, Launceston, Ten Days on the Island

Maps, 2000
Music theatre collaboration for soprano, recorder, violin, violoncello, percussion & chef
Approx .2 hours
Commissioned by Aphids in association with Kokon (Denmark)
First performed November 2000 by Aphids/Kokon, North Melbourne Town Hall, and October 2002, Copenhagen, Denmark